EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	47	564/42	US-PGPUB; USPAT; EPO; DERWENT	OR	ON	2007/02/19 15:49
L2	340	549/57	US-PGPUB; USPAT; EPO; DERWENT	OR	ON	2007/02/19 15:49
L3	252	549/51	US-PGPUB; USPAT; EPO; DERWENT	OR	ON	2007/02/19 15:50
L4	47703	arylthio acetophenones	US-PGPUB; USPAT; EPO; DERWENT	OR	ON	2007/02/19 15:50
L5	1	L1 and L4	US-PGPUB; USPAT; EPO; DERWENT	OR	ON	2007/02/19 15:50
L6	40	L2 and L4	US-PGPUB; USPAT; EPO; DERWENT	OR	ON	2007/02/19 15:51
L7	23	L3 and L4	US-PGPUB; USPAT; EPO; DERWENT	OR	ON	2007/02/19 15:52
L8	2252	bromoacetophenones	US-PGPUB; USPAT; EPO; DERWENT	OR	ON	2007/02/19 15:52
L9	1177	L8 and L4	US-PGPUB; USPAT; EPO; DERWENT	OR	ON	2007/02/19 15:53
L10	5808	thiolate	US-PGPUB; USPAT; EPO; DERWENT	OR	ON	2007/02/19 15:53
L11	34	L8 and L10	US-PGPUB; USPAT; EPO; DERWENT	OR	ON	2007/02/19 15:53

US 20060264673 A1 US-PGPUB 20061123 133 Copper-catalyzed formation of carbon-heteroatom and carbon-carbon bonds 564/386 568/680 Buchwald; Stephen L. et al.

US 20060223849 A1 US-PGPUB 20061005 Benzazole derivatives, compositions, and methods of use as beta-secretase inhibitors 514/310 514/338; 546/148; 546/270.1; 546/271.7; 546/272.7; 546/273.4 Mjalli; Adnan M.M. et al.

US 20060178537 A1 US-PGPUB 20060810 4 Method for producing a-(3-arylthio)-acetophenones 568/43 Altmayer; Marco et al.

US 20060106051 A1 US-PGPUB 20060518 Imidazo-fused oxazolo[4,5-b]pyridine and imidazo-fused thiazolo[4,5-b]pyridine based tricyclic compounds and pharmaceutical compositions comprising same 514/292 546/83 Dyckman; Alaric et al.

US 20060100261 A1 US-PGPUB 20060511 Furan or thiopene derivative and medicinal use thereof 514/408 514/438; 514/461; 548/561; 549/76 Hamamura; Kazumasa et al.

US 20050288515 A1 US-PGPUB 20051229 Chemical compounds 548/233 Brown, Matthew Lee et al.

US 20050277683 A1 US-PGPUB 20051215 Novel pyrrolidine bicyclic compounds and its derivatives, compositions and methods of use 514/365 548/200 Jacobs, Jeffrey et al.

US 20050215794 A1 US-PGPUB 20050929 Copper-catalyzed formation of carbon heteroatom and carbon-carbon bonds 546/108 546/159; 564/445 Buchwald, Stephen L. et al.

US 20050182121 A1 US-PGPUB 20050818 42 Thio semicarbazone and semicarbozone inhibitors of cysteine proteases and methods of their use 514/406 514/581; 514/590; 548/379.4; 564/20; 564/34 Cohen, Fred E. et al.

US 20050043381 A1 US-PGPUB 20050224 62 Aminopyrazole compounds 514/372 548/214 Johnson, Michael David et al.

US 20040019216 A1 US-PGPUB 20040129 139 Copper-catalyzed formation of carbon-heteroatom and carbon-carbon bonds 546/268.1 546/304; 548/517; 548/557; 564/404; 564/405 Buchwald, Stephen L. et al.

US 20040014801 A1 US-PGPUB 20040122 39 Thio semicarbazone and semicarbazone inhibitors of cysteine proteases and methods of their use 514/406 514/582; 514/590; 548/379.4; 564/20; 564/34 Cohen, Fred E. et al.

US 20030069223 A1 US-PGPUB 20030410 28 Novel pyrrolidine bicyclic compounds and its derivatives, compositions and methods of use 514/211.01 514/210.17; 514/217.11; 514/227.5; 514/317; 514/365; 514/423; 540/544; 540/607; 544/59; 546/226; 548/200; 548/530; 548/950 Jacobs, Jeffrey et al.

US 20030065187 A1 US-PGPUB 20030403 140 Copper-catalyzed formation of carbon-heteroatom and carbon-carbon bonds 546/304

546/335; 548/557; 548/566; 564/404; 564/481 Buchwald, Stephen L. et al.

US 20020061896 A1 US-PGPUB 20020523 45 Imidazopyrimidine nucleoside analogues with anti-HIV activity 514/259.5 514/43; 514/63; 514/80; 544/229; 544/244; 544/281 Siddiqul, Arshad et al.

US 7115784 B2 USPAT 20061003 126 Copper-catalyzed formation of carbon-heteroatom and carbon-carbon bonds 568/630 568/631; 568/632; 568/633; 568/634; 568/648; 568/649; 568/655; 568/656; 568/657 Buchwald; Stephen L. et al.

US 6987104 B2 USPAT 20060117 25 Pyrrolidine bicyclic compounds and its derivatives, compositions and methods of use 514/215 548/123; 548/124; 548/127; 548/128; 548/131; 548/135; 548/136; 548/143; 548/182; 548/200; 548/201; 548/206; 548/208; 548/215; 548/262.2; 548/300.1; 548/311.1; 548/356.1; 548/366.4; 548/401; 548/530 Jacobs; Jeffrey et al.

US 6897240 B2 USPAT 20050524 39 Thio semicarbazone and semicarbazone inhibitors of cysteine proteases and methods of their use 514/582 514/237.8; 514/590; 544/162; 564/18; 564/20; 564/34 Cohen; Fred E. et al.

US 6867298 B2 USPAT 20050315 123 Copper-catalyzed formation of carbon-heteroatom and carbon-carbon bonds 540/489 540/490; 540/492; 540/500; 540/501; 540/502; 540/503; 544/180; 544/2; 544/265; 544/298; 544/65; 544/66; 544/7; 544/8; 548/100; 548/122; 548/124; 548/127; 548/250; 548/300.1; 548/304.4; 548/356.1; 548/361.1; 548/440; 548/469; 568/1; 568/12; 568/13 Buchwald; Stephen L. et al.

US 6759554 B2 USPAT 20040706 124 Copper-catalyzed formation of carbon-heteroatom and carbon-carbon bonds 564/192 564/215; 564/250; 564/251; 564/386; 564/389; 564/391; 564/407 Buchwald; Stephen L. et al.

US 6544923 B1 USPAT 20030408 29 Surface-confined catalytic compositions 502/159 502/152 Ying; Jackie Y. et al.

US 6015907 A USPAT 20000118 38 Trisubstituted pyridine dyes 546/329 Marshall; John L.

US 5958954 A USPAT 19990928 118 Synthesis and use of retinoid compounds having negative hormone and/or antagonist activities 514/333 514/337; 514/432; 514/456; 546/256; 546/280.1; 546/282.7; 549/396; 549/408; 549/49; 549/51 Klein; Elliott S. et al.

US 5945382 A USPAT 19990831 18 Fungicidal arylpyrazoles 504/280 514/406; 548/377.1 Cantegril; Richard et al.

US 5935976 A USPAT 19990810 83 Antiviral ethers of aspartate protease substrate isosteres 514/346 546/291 Bold; Guido et al.

US 5859051 A USPAT 19990112 40 Antidiabetic agents 514/469 514/307; 514/415; 514/457; 546/146; 548/469; 549/283; 549/462 Adams; Alan D. et al.

US 5807891 A USPAT 19980915 80 Antiviral ethers of aspartate protease substrate isosteres 514/487 514/479; 546/221; 548/168; 560/27 Bold; Guido et al.

US 5663200 A USPAT 19970902 81 Antiviral ethers of aspartate protease substrate isosteres 514/487 514/479; 544/168; 546/221; 548/200; 560/27 Bold; Guido et al.

US 4971979 A USPAT 19901120 23 Alkadiene derivatives, and pharmaceutical compositions containing them 514/315 514/449; 546/237; 546/238; 546/240; 546/248; 549/510; 549/511 Malleron; Jean-Luc et al.

US 4886835 A USPAT 19891212 23 Alkadiene derivatives, their preparation, and pharmaceutical compositions containing them 514/532 514/533; 514/545; 514/546; 514/547; 514/548; 514/549; 560/10; 560/15; 560/152; 560/153; 560/154; 560/17 Malleron; Jean-Luc et al.

US 4847263 A USPAT 19890711 7 Imidazopyridine derivatives and compositions containing them 514/300 546/121 George; Pascal et al.

US 4628094 A USPAT 19861209 8 Tris(disubstituted amino)sulfonium perfluoroalkoxides and perfluoroalkylmercaptides and process for their preparation 546/186 526/243; 546/187; 546/191; 546/208; 548/542; 564/101; 564/102 Farnham; William B. et al.

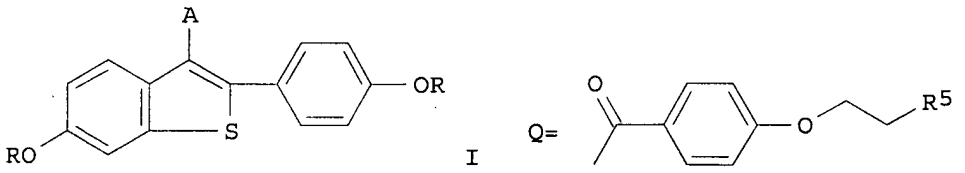
US 4621125 A USPAT 19861104 9 Tris(disubstituted amino)sulfonium perfluoroalkoxides and -perfluoroalkylmercaptides and process for their preparation 526/190 526/194; 526/329.7 Farnham; William B. et al.

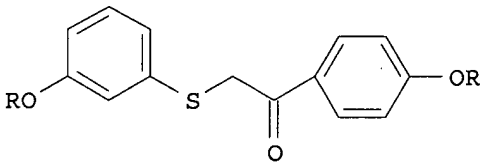
US 4123529 A USPAT 19781031 Phenylpiperazine derivatives 514/254.02 514/252.13; 514/254.1; 514/826; 544/369; 544/379 Verge; John P. et al.

L4 ANSWER 31 OF 42 CAPLUS COPYRIGHT 2007 ACS on STN
AN 1996:237478 CAPLUS <<LOGINID::20070219>>
DN 124:289249
TI An improved process for preparing 3-(4-aminoethoxybenzoyl)benzo[b]thiophenes
IN Alt, Charles Arthur
PA Eli Lilly and Co., USA
SO Eur. Pat. Appl., 15 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 693488	A1	19960124	EP 1995-305085	19950720
	EP 693488	B1	20010919		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, NL, PT, SE				
	US 5523416	A	19960604	US 1995-422294	19950414
	HU 71596	A2	19960129	HU 1995-2176	19950719
	AU 9525068	A	19960201	AU 1995-25068	19950719
	AU 684181	B2	19971204		
	ZA 9506031	A	19970120	ZA 1995-6031	19950719
	CA 2154319	A1	19960123	CA 1995-2154319	19950720
	FI 9503513	A	19960123	FI 1995-3513	19950720
	NO 9502891	A	19960123	NO 1995-2891	19950720
	CN 1116624	A	19960214	CN 1995-109618	19950720
	JP 08053440	A	19960227	JP 1995-183923	19950720
	IL 114684	A	19990620	IL 1995-114684	19950720
	AT 205842	T	20011015	AT 1995-305085	19950720
	ES 2160668	T3	20011116	ES 1995-305085	19950720
	PT 693488	T	20020228	PT 1995-305085	19950720
	BR 9503408	A	19960227	BR 1995-3408	19950721
	US 5512684	A	19960430	US 1995-512724	19950808
PRAI	US 1994-279456	A	19940722		
	US 1995-422294	A1	19950414		

OS CASREACT 124:289249; MARPAT 124:289249
GI





II

AB A process for preparing 6-alkoxy-3-(4-alkoxyphenyl)benzo[b]thiophenes (I; A = H; R = same or different C1-6 alkyl) in good yield on a manufacturing scale without generating a thick, potentially yield-reducing, paste and thereby without mixing problems, involves intramol. cyclization of α-(3-alkoxyphenylthio)-4-alkoxyacetophenones (II; R = same as above). The invention also provides methods for converting α-(alkoxyphenylthio)-4-alkoxyacetophenones I (A = H; R = same as

above) into 6-hydroxy-2-(4-hydroxyphenyl)-3-[4-(2-aminoethoxy)benzoyl]benzo[B]thiophenes I (A = Q, R = H; R5 = NR1R2; wherein R1, R2 = C1-4 alkyl, or R1R2 = C4-6 polymethylene or CH2CH2OCH2CH2) via acylation of a dialkoxy benzo[b]thiophene I (A = H; R = same as above) with an acylating agent R4-Q (R4 = Cl, Br, an active ester, etc.; R5 = same as above) under Friedel-Crafts conditions. Thus, 164 g α-bromo-4-methoxyacetophenone was added portion-wise to a mixture of 100 g 4-methoxybenzenethiol and 39 g KOH in 300 mL and denatured EtOH in a cooling and stirred for 10 min in the cooling bath and at ambient temperature for 3 h to give, after workup, 158 g α-(3-methoxyphenylthio)-4-methoxyacetophenone. The latter compound (6.92 g) was added steadily over 1/2 h to a mixture of 41.5 g polyphosphoric acid and 13.8 g phosphoric acid and the reaction mixture was heated at 85° for 1.75 h and cooled to 50°, to give , after extraction with toluene and crystallization, the desired 6-isomer, I (A = H, R = Me)(69% yield). The latter compound (30 g) was heated with 90 g pyridine hydrochloride with stirring at 210° for 30 min to give, after workup, 25.5 g I (A = R = H), which (40 g) was acetylated by Ac2O in the presence of 4-dimethylaminopyridine in pyridine to give 52.5 g I (A = H, R = Ac). This compound (20 g) was added to a solution of 4-(2-piperidinoethoxy)benzoyl chloride (prepared from 16.3 g of the benzoic acid derivative) in ClCH2CH2Cl and stirred vigorously, followed by adding 73.4 g AlCl3 over 3 min, and the resulting mixture was stirred for 1 h to give, after workup, the desired product I [A = Q (wherein R5 = piperidino), R = Ac] as an oil, which was saponified with a mixture of 275 mL MeOH and 55 mL 5 n aqueous NaOH under reflux to give 10.5 g the title compound I

[A = Q, wherein R5 = piperidino, R = H].

L4 ANSWER 32 OF 42 CAPLUS COPYRIGHT 2007 ACS on STN
AN 1987:433189 CAPLUS <<LOGINID::20070219>>
DN 107:33189
TI Treatment of mammary cancer
IN Black, Larry J.; Clemens, James A.
PA Eli Lilly and Co., USA
SO U.S., 10 pp. Cont. of U.S. Ser. No. 289,360, abandoned.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4656187	A	19870407	US 1983-556875	19831201
PRAI	US 1981-289360	A1	19810803		

AB A method of inhibiting the growth of estrogen-dependent mammary cancers comprises administering about 20 mg/kg/day of a 1st compound 6-hydroxy-2-(4-hydroxyphenyl)-3-[4-(2-pyrrolidinoethoxy)benzoyl]benzo[b]th iophene (I) and .apprx.5 mg/kg/day of a 2nd compound tamoxifen (II). Also, a pharmaceutical combination comprises .apprx.4 parts by weight of I and .apprx.1 part by weight of II. I hydrochloride was prepared by reacting 4-(2-pyrrolidinoethoxy)benzoic acid with thionyl chloride and then with 6-methoxy-2-(4-methoxyphenyl)benzo[b]thiophene (prepared from 3-methoxybenzenethiol and α-bromo-4-methoxyacetophenone). Oral doses of I 20 and II 5 mg/kg/day were given for 8 wks to rats with induced mammary tumors. Half of the rats receiving the combination treatment experienced a total regression of their tumors. The rest had only a very modest growth of their tumors during the treatment. A synergistic effect was shown.

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NEWS 12	DEC 14	GBFULL and FRFULL enhanced with IPC 8 features and functionality
NEWS 13	DEC 18	CA/CAplus pre-1967 chemical substance index entries enhanced with preparation role
NEWS 14	DEC 18	CA/CAplus patent kind codes updated
NEWS 15	DEC 18	MARPAT to CA/CAplus accession number crossover limit increased to 50,000
NEWS 16	DEC 18	MEDLINE updated in preparation for 2007 reload
NEWS 17	DEC 27	CA/CAplus enhanced with more pre-1907 records
NEWS 18	JAN 08	CHEMLIST enhanced with New Zealand Inventory of Chemicals
NEWS 19	JAN 16	CA/CAplus Company Name Thesaurus enhanced and reloaded
NEWS 20	JAN 16	IPC version 2007.01 thesaurus available on STN
NEWS 21	JAN 16	WPIDS/WPINDEX/WPIX enhanced with IPC 8 reclassification data
NEWS 22	JAN 22	CA/CAplus updated with revised CAS roles
NEWS 23	JAN 22	CA/CAplus enhanced with patent applications from India
NEWS 24	JAN 29	PHAR reloaded with new search and display fields
NEWS 25	JAN 29	CAS Registry Number crossover limit increased to 300,000 in multiple databases
NEWS 26	FEB 13	CASREACT coverage to be extended
NEWS 27	Feb 15	PATDPASPC enhanced with Drug Approval numbers
NEWS 28	Feb 15	RUSSIAPAT enhanced with pre-1994 records

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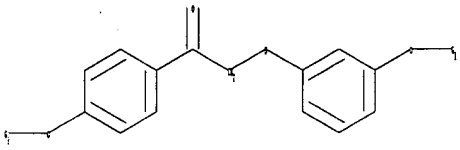

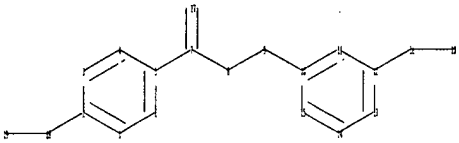

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ring nodes :
1 2 3 4 5 6 10 11 12 13 14 15
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2-18 5-7 7-8 7-17 8-9 9-10 12-16 16-20 18-19
ring bonds :
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exact/norm bonds :
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exact bonds :
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normalized bonds :
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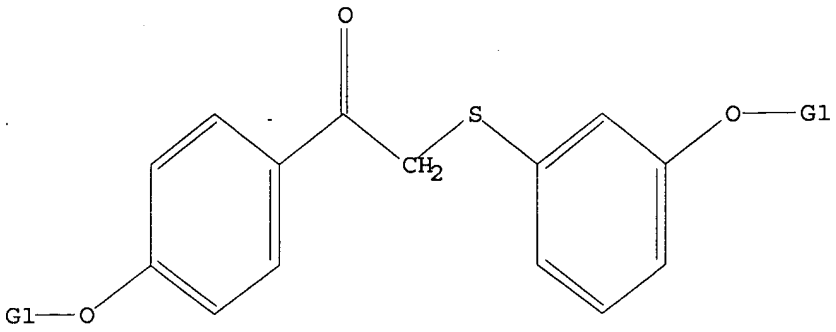

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FILE LAST UPDATED: 18 Feb 2007 (20070218/ED)

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=> s L3
L4 42 L3

=> d L4 1-42 bib abs

L4 ANSWER 1 OF 42 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2006:1198029 CAPLUS
DN 146:100617
TI Enantioselective synthesis of 1,4-dihydrobenzoxathiins via sulfoxide-directed borane reduction
AU Waters, Marjorie S.; Onofiok, Ekama; Tellers, David M.; Chilenski, Jennifer R.; Song, Zhiguo Jake
CS Department of Process Research, Merck Research Laboratories, Rahway, NJ, 07065, USA
SO Synthesis (2006), (20), 3389-3396
CODEN: SYNTBF; ISSN: 0039-7881
PB Georg Thieme Verlag
DT Journal
LA English
AB A novel sulfoxide-directed borane reduction was shown to give a variety of 2-substituted 1,4-dihydrobenzoxathiins. For all substrates evaluated, the reaction is completely stereospecific. Application of this methodol. to the chiral synthesis of an artificial sweetener was demonstrated. The crystal structure of (S)-2-tert-butyl-6-benzyloxy-2,3-dihydro-1,4-benzoxathiin is presented [orthorhombic, space group P212121, a 9.587(11), b 9.5799(11), c 18.842(2) Å, V 1716.4(3) Å3, Z 4].
RE.CNT 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 2 OF 42 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2005:547361 CAPLUS
DN 143:59836
TI A process for preparing benzoic acid derivatives, useful as intermediates for preparation of raloxifene
IN Luke, Wayne Douglas
PA Eli Lilly and Company, USA
SO U.S. Pat. Appl. Publ., 10 pp.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2005137396	A1	20050623	US 2003-745188	20031222
	US 7012153	B2	20060314		
PRAI	US 2003-745188		20031222		

OS CASREACT 143:59836; MARPAT 143:59836
AB The invention relates to a preparation of benzoic acid derivs. of formula RO2C-p-C6H4-O(CH2)2-3N(R1)R2 [wherein: R is alkyl; R1 and R2 are independently alkyl, or combined together with the nitrogen atom form piperidinyl, pyrrolidinyl, or morpholinyl, etc.], useful as intermediates for preparation of raloxifene. For instance, 4-[2-(piperidin-1-yl)ethoxy]benzoic acid hydrochloride was prepared via etherification of Me 4-hydroxybenzoate by 1-(β-chloroethyl)piperidine hydrochloride and subsequet hydrolysis with a yield of 99.2%.
RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 3 OF 42 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2005:408071 CAPLUS
DN 142:447008
TI Thioetherification process for the production of α-(3-arylthio)acetophenones from alkali metal 3-alkoxyphenylthiolates and haloalkoxyacetophenones
IN Altmayer, Marco; Siegel, Wolfgang
PA BASF A.-G., Germany
SO Ger. Offen., 4 pp.
CODEN: GWXXBX
DT Patent

LA German
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 10349249	A1	20050512	DE 2003-10349249	20031020
	CA 2541844	A1	20050512	CA 2004-2541844	20041014
	WO 2005042477	A1	20050512	WO 2004-EP11521	20041014
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	EP 1678127	A1	20060712	EP 2004-790384	20041014
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK				
	CN 1871210	A	20061129	CN 2004-80030952	20041014
	BR 2004015544	A	20061226	BR 2004-15544	20041014
PRAI	DE 2003-10349249	A	20031020		
	WO 2004-EP11521	W	20041014		

OS MARPAT 142:447008
GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB α-(3-Arylthio)acetophenones [I; R1, R2 = C1-6 alkyl, SiR33; R3= C1-6 alkyl (un)substituted Ph, (un)substituted benzyl; e.g., 1-(4-methoxyphenyl)-2-[(3-methoxyphenyl)thio]ethanone] are prepared in high yield and selectivity by the thioetherification of a haloalkoxyacetophenone [II; X = Cl, Br; e.g., 3-MeOC6H4COCH2Cl] with an 3-alkoxyphenyl thiolate (III; M = alkali metal; sodium 3-methoxyphenylthiolate) in methanol.

L4 ANSWER 4 OF 42 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2005:7224 CAPLUS
DN 143:459959
TI Studies on the synthesis of 6-methoxy-2-(4-methoxyphenyl)benzo[b]thiophene and its isomers
AU Xiang, Hua; Liao, Qingjiang
CS School of Pharmacy, China Pharmaceutical University, Nanjing, 210009, Peop. Rep. China
SO Zhongguo Yaowu Huaxue Zazhi (2003), 13(3), 153-155
CODEN: ZYHZEF; ISSN: 1005-0108
PB Zhongguo Yaowu Huaxue Zazhi Bianjibu
DT Journal
LA Chinese
OS CASREACT 143:459959
AB 6-Methoxy-2-(4-methoxyphenyl)benzo[b]thiophene, an important intermediate for synthesis of Raloxifene hydrochloride was synthesized from 4-methoxyacetophenone via bromination and thioetherification followed by cyclization-rearrangement reaction with polyphosphoric acid (PPA) as a catalyst. Three isomers accompanied by the target compound were isolated from the mother liquor and their chemical structures were confirmed by IR, 1H NMR, and HRMS. After using methanesulfonic acid as a catalyst instead of PPA, the yield of the target compound was increased from 60.4% to 73.2%.

L4 ANSWER 5 OF 42 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2004:756007 CAPLUS
DN 141:277354
TI Procedure for the production of α-(3-arylthio)acetophenones
IN Altmayer, Marco; Siegel, Wolfgang
PA BASF Ag, Germany
SO Ger. Offen., 4 pp.
CODEN: GWXXBX
DT Patent
LA German
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 10309645	A1	20040916	DE 2003-10309645	20030306
	CA 2517689	A1	20040916	CA 2004-2517689	20040220
	WO 2004078705	A1	20040916	WO 2004-EP1676	20040220
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI				
	RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	EP 1603868	A1	20051214	EP 2004-713039	20040220
	EP 1603868	B1	20060913		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
	BR 2004008027	A	20060214	BR 2004-8027	20040220
	CN 1756738	A	20060405	CN 2004-80006072	20040220
	JP 2006519794	T	20060831	JP 2006-504444	20040220
	AT 339401	T	20061015	AT 2004-713039	20040220
	US 2006178537	A1	20060810	US 2005-547342	20050901
PRAI	DE 2003-10309645	A	20030306		
	WO 2004-EP1676	W	20040220		

OS CASREACT 141:277354; MARPAT 141:277354
AB α-(3-Arylthio)acetophenones 4-R1OC6H4COCH2SC6H4OR2-3 [R1, R2 = C1-6 alkyl, (un)substituted Ph, (un)substituted benzyl; e.g., 1-(4-methoxyphenyl)-2-[(3-methoxyphenyl)thio]ethanone] are prepared in high yield and selectivity by: (A) reacting an acetophenone 4-R1OC6H4COCH3 (e.g., 4-methoxyacetophenone) with sulfuryl chloride convert and subsequently hydrolyzing the reaction mixt; and (B) reacting the reaction mixture with a thiophenol 3-R2OC6H4SH (e.g., 3-methoxythiophenol).

L4 ANSWER 6 OF 42 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2004:617920 CAPLUS
DN 142:463529
TI Synthesis of raloxifene hydrochloride
AU Gong, Ping; Zhao, Yanfang; Wang, Dun
CS School of Pharmaceutical Engineering, Shenyang Pharmaceutical University, Shenyang, 110016, Peop. Rep. China
SO Shenyang Yaoke Daxue Xuebao (2003), 20(2), 111-113
CODEN: SYDXFF; ISSN: 1006-2858
PB Shenyang Yaoke Daxue Xuebao Bianjibu
DT Journal
LA Chinese
OS CASREACT 142:463529
AB Raloxifene hydrochloride, which is a selective estrogen receptor modulator, was synthesized from 3-methoxybenzenethiol and 2-bromo-4'-methoxyacetophenone by etherification, cyclization in the presence of polyphosphoric acid, hydrolysis with HBr/HOAc to obtain 6-hydroxy-2-(4-hydroxyphenyl)benzothiophene, acylation with acetic anhydride, acylation with 4-[2-(1-piperidinyl)ethoxy]benzoyl chloride in the presence of AlCl3, saponification with 5M NaOH solution in methanol, and saltification with HCl. The overall yield was 10.0%, and its structure was confirmed by MS,

1H NMR, 13C NMR.

L4 ANSWER 7 OF 42 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2004:380342 CAPLUS
DN 141:81657
TI Oxidation of raloxifene to quinoids: potential toxic pathways via a diquinone methide and o-quinones
AU Yu, Linning; Liu, Hong; Li, Wenkui; Zhang, Fagen; Luckie, Connie; Van Breemen, Richard B.; Thatcher, Gregory R. J.; Bolton, Judy L.
CS Department of Medicinal Chemistry and Pharmacognosy, College of Pharmacy, University of Illinois at Chicago, Chicago, IL, 60612-7231, USA
SO Chemical Research in Toxicology (2004), 17(7), 879-888
CODEN: CRTOEC; ISSN: 0893-228X
PB American Chemical Society
DT Journal
LA English
AB Raloxifene was approved in 1997 by the FDA for the treatment of osteoporosis in postmenopausal women, and it is currently in clin. trials for the chemoprevention of breast cancer. Before widespread use as a chemopreventive agent in healthy women, the potential cytotoxic mechanisms of raloxifene should be investigated. In the current study, raloxifene was incubated with GSH and either rat or human liver microsomes, and the metabolites and GSH conjugates were characterized using liquid chromatog.-tandem mass spectrometry. Raloxifene was converted to raloxifene diquinone methide GSH conjugates, raloxifene o-quinone GSH conjugates, and raloxifene catechols. For comparison, three raloxifene catechols were synthesized and characterized. In particular, 7-hydroxyraloxifene was found to oxidize to the 6,7-o-quinone. As compared with raloxifene diquinone methide, which has a half-life of less than 1 s in phosphate buffer, the half-life of raloxifene 6,7-o-quinone was much longer at t1/2 = 69 ± 2.5 min. The stability offered by raloxifene 6,7-o-quinone implies that it may be more toxic than raloxifene diquinone methide. Cytotoxicity studies in the human breast cancer cell lines S30 and MDA-MB-231 showed that 7-hydroxyraloxifene was more toxic than raloxifene in both cell lines. These results suggest that raloxifene could be metabolized to electrophilic and redox active quinoids, which have the potential to cause toxicity in vivo.
RE.CNT 39 THERE ARE 39 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 8 OF 42 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2004:182535 CAPLUS
DN 140:235898
TI Preparation of aryl and arylcarbonylbenzothiophenes, -benzofurans, -indenes, and -indoles as tubulin binding ligands and corresponding prodrug constructs thereof useful as antitumor agents
IN Pinney, Kevin G.; Mocharla, Vani P.; Chen, Zhi; Garner, Charles M.; Hadimani, Mallinath; Kessler, Raymond; Dorsey, James M.; Edvardsen, Klaus; Chaplin, David J.; Prezioso, Joseph; Ghatak, Anjan; Ghatak, Usha
PA Oxigene, Inc., USA; Baylor University
SO U.S. Pat. Appl. Publ., 33 pp., Cont.-in-part of U.S. Ser. No. 804,280.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 4

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2004044059	A1	20040304	US 2003-425462	20030429
	US 7091240	B2	20060815		
	US 2002055643	A1	20020509	US 2001-804280	20010312
	US 6593374	B2	20030715		
	AU 2004201471	A1	20040506	AU 2004-201471	20040407
	US 2006100179	A1	20060511	US 2005-112055	20050422
PRAI	US 2000-188295P	P	20000310		
	US 2001-804280	A2	20010312		

	AU 2000-35973	A3	20000216
	US 2002-218833	A1	20020814

OS MARPAT 140:235898
GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Title compds. I [R1 through R14 independently = H, OH, alkyl, aryl, benzyl, amine, halo, alkoxy, phosphate, phosphoramidate, and amino acid acyl; Y1 and Y2 are H or OH when ring bond is saturated; X1 and X2 = bond, O, or CO; Z = CH2, O, N, or S] have been prepared and disclosed as tublin binding agents having a semi-rigid mol. framework capable of maintaining aryl-aryl, pseudo pi stacking distances appropriate for mol. recognition of tubulin. Thus, e.g., II, was prepared via substitution of α-bromo-3-tert-butyldimethylsilyloxy-4-methoxyacetophenone with 3-methoxythiophenol with subsequent acid catalyzed intramol. cyclization to form intermediate thiophene which underwent Friedel-Crafts acylation with 3,4,5-trimethoxybenzoyl chloride. In phenolic or amino form, these ligands may be further functionalized to prepare phosphate esters, phosphate salts, phosphoramidates, and other prodrugs capable of demonstrating selective targeting and destruction of tumor cell vasculature. In the in vitro inhibition of tubulin polymerization assay, I were found to possess IC50 values ranging from 0.5-40 μM. As tublin binding agents, I are useful as antitumor agents.

RE.CNT 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 9 OF 42 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2003:726588 CAPLUS
DN 139:345292
TI Nitrosation, nitration, and autoxidation of the selective estrogen receptor modulator raloxifene by nitric oxide, peroxynitrite, and reactive nitrogen/oxygen species
AU Toader, Violeta; Xu, Xudong; Nicolescu, Adrian; Yu, Linning; Bolton, Judy L.; Thatcher, Gregory R. J.
CS Department of Medicinal Chemistry and Pharmacognosy, College of Pharmacy, University of Illinois at Chicago, Chicago, IL, 60612-7231, USA
SO Chemical Research in Toxicology (2003), 16(10), 1264-1276
CODEN: CRTOEC; ISSN: 0893-228X
PB American Chemical Society
DT Journal
LA English
AB The regulation of estrogenic and antiestrogenic effects by selective estrogen receptor modulators (SERMs) provides the basis for use in long-term therapy in cancer chemoprevention and postmenopausal osteoporosis. However, the evidence for carcinogenic properties within this class requires study of potential pathways of toxicity. There is strong evidence for the elevation of cellular levels of NO in tissue treated with SERMs, including the benzothiophene derivative, raloxifene, in part via up-regulation of nitric oxide synthases. Therefore, the reactions of 17β-estradiol (E2), raloxifene, and an isomer with NO, peroxynitrite, and reactive nitrogen/oxygen species (RNOS) generated from NO2-/H2O2 systems were examined Peroxynitrite from bolus injection or slow release from higher concns. of 3-morpholinosydnonimine (SIN-1) reacted with the benzothiophenes and E2 to give aromatic ring nitration, whereas peroxynitrite, produced from the slow decomposition of lower concns. of SIN-1, was relatively unreactive toward E2 and yielded oxidation and nitrosation products with raloxifene and its isomer. The oxidation and nitrosation products formed were characterized as a dimer and quinone oxime derivative Interestingly, the reaction of the benzothiophenes with NO in aerobic solution efficiently generated the same oxidation products. Stable quinone oximes are not unprecedented but have not been previously reported as

products of RNOS-mediated metabolism The reaction of glutathione (GSH) with the quinone oxime gave both GSH adducts from Michael addition and reduction to the corresponding o-aminophenol. The ready autoxidn. of raloxifene, observed in the presence of NO, is the first such observation on the reactivity of SERMs and is potentially a general phenomenon of significance to SERM chemical toxicol.

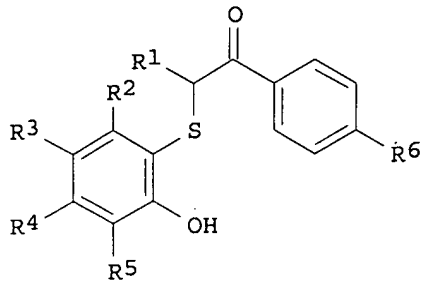
RE.CNT 89 THERE ARE 89 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 10 OF 42 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2003:610836 CAPLUS
DN 139:271010
TI Application of novel benzothiophene derivatives in treating postmenstrual syndrome and other estrogen-related diseases
IN Chen, Zhengying; Gao, Qixiu; Yuan, Lizhen; Tang, Zhongxiong; Wu, Zuze
PA Institute of Radiomedicine, Academy of Military Medical Sciences of PLA, Peop. Rep. China; Luyin Lihua Medical Science and Technology Development Co., Ltd., Beijing
SO Faming Zhuanli Shenqing Gongkai Shuomingshu, 20 pp.
CODEN: CNXXEV
DT Patent
LA Chinese
FAN.CNT 1

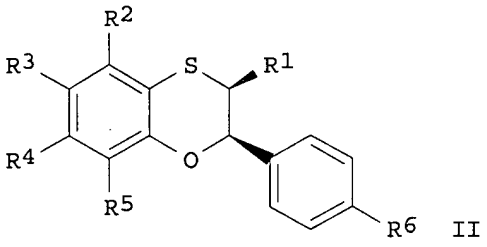
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI CN 1370533	A	20020925	CN 2001-104434	20010227
PRAI CN 2001-104434		20010227		

AB 6-R1-2-(4-R2-phenyl)-3-[4-(R3-(CH2)n-O)phenyl-Z]- benzothiophene derivs. (R1 = OH, C1-4 alkoxy, or phospho; R2 = C1-4 alkyl, C1-4 alkoxy, or phospho; R1 or R2 = C1-4 alkoxy, and when R1 = OH, R2 >< C1-4 alkoxy; R3 = 1-pyridyl, 1-pyrrolidinyl, or N- morphinyl; Z = O or C=O; and n = 2 or 3) and their medical salts are synthesized by O-demethylating 6-methoxybenzothiophene with BBr3, etherifying with benzyl bromide in the presence of Cs2CO3, substituting with triisopropyl borate/Li butylide, substituting with 4-R5-Ph bromide to obtain 2-(4-R5-phenyl)-6-benzyloxybenzothiophene (I); brominating (I) with Br2 in the presence of NaHCO3, oxidizing with H2O2 in the presence of trifluoroacetic acid to obtain 2- -6-benzyloxy-3-bromobenzothiophene 1-oxide, etherifying with 4-(R3-(CH2)n-O)phenol in the presence of NaH, hydrogenating in HCOONH4 in the presence of Pd/C, phosphorylating with POCl3, salifying to obtain the derivs.; acylating (I) with 4-(R3-(CH2)n- O)benzoyl chloride in the presence of AlCl3, hydrogenating, phosphorylating, and/or salifying to obtain the derivs. (Z = C=O). The synthetic benzothiophene derivs. may be used to treat the postmenstrual syndrome and other estrogen-related diseases.

L4 ANSWER 11 OF 42 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2003:89903 CAPLUS
DN 138:271609
TI Dehydrative Reduction: A Highly Diastereoselective Synthesis of syn-Bisaryl(or Heteroaryl) Dihydrobenzoxathiins and Benzodioxane
AU Kim, Seongkon; Wu, Jane Y.; Chen, Helen Y.; DiNinno, Frank
CS Department of Medicinal Chemistry, Merck Research Laboratories, Rahway, NJ, 07065, USA
SO Organic Letters (2003), 5(5), 685-688
CODEN: ORLEF7; ISSN: 1523-7060
PB American Chemical Society
DT Journal
LA English
OS CASREACT 138:271609
GI



I



II

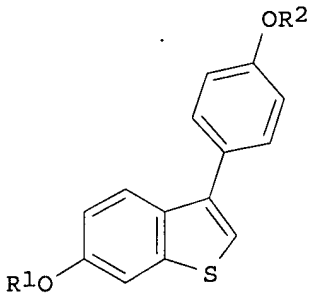
AB Dehydrative reduction/intramol. cyclization of α-(hydroxyphenyl)thio-substituted ketones I [R1 = Me, Et, Me2CH, Me3C, cyclopentyl, 4-(Me2CH)3SiOC6H4, 2-thienyl, 4-pyridyl, etc.; R2 = H, F, Br, Et, PhCH2O; R3 = H, HO, PhCH2O; R4 = H, Br, PhCH2O; R5 = H, Cl, Me, Et; R6 = HO, (Me2CH)3SiO] induced by trifluoroacetic acid/triethylsilane gave syn 2,3-disubstituted dihydrobenzoxathiins II with total diastereoselectivity (>99:1) and in good to excellent yields (30-95%).

RE.CNT 51 THERE ARE 51 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

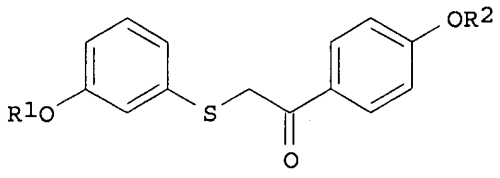
L4 ANSWER 12 OF 42 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2002:408662 CAPLUS
DN 136:401637
TI Preparation of 3-arylbenzothiophenes by cyclodehydration of phenylthioacetophenones using activated clay or zeolite catalysts.
IN Luke, Wayne Douglas; Sanderson, Heidi Ann; Zheng, Hua
PA Eli Lilly and Company, USA
SO PCT Int. Appl., 26 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002042289	A2	20020530	WO 2001-US42940	20011114
	WO 2002042289	A3	20020906		
	WO 2002042289	A8	20040212		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	AU 2002030409	A5	20020603	AU 2002-30409	20011114
	US 2004132775	A1	20040708	US 2003-415569	20030922
	US 6921827	B2	20050726		
PRAI	US 2000-253212P	P	20001127		

WO 2001-US42940 W 20011114
OS CASREACT 136:401637; MARPAT 136:401637
GI



I



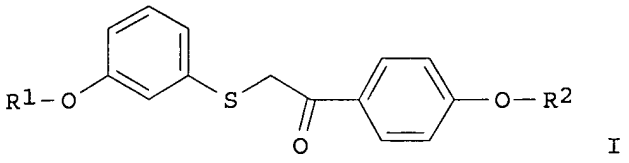
II

AB Title compds. (I; R1, R2 = H, protecting group) were prepared by cyclodehydration of phenylthioacetophenones (II; variables as above) in the presence of acid activated clays or acid activated zeolites and in the presence of solvents. Thus, PhMe, α-(3-methoxyphenylthio)-4-methoxyacetophenone, and "acid-activated clay" (Engelhard X-9107) were combined and refluxed 2 h using a Dean Stark trap. By HPLC the product mixture consisted of 96.7% 6-methoxy-3-(4-methoxyphenyl)benzo[b]thiophene, 1.1% 6-methoxy-2-(4-methoxyphenyl)benzo[b]thiophene, 2.1% 4-methoxy-3-(4-methoxyphenyl)benzo[b]thiophene, and 0.1% 4-methoxy-2-(4-methoxyphenyl)benzo[b]thiophene.

L4 ANSWER 13 OF 42 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2002:408636 CAPLUS
DN 136:401533
TI Coupling reaction process for preparing α-(3-arylthio)acetophenones from thiophenol derivs. and α-(leaving group)-substituted acetophenones
IN Luke, Wayne Douglas; Sanderson, Heidi Ann; Zheng, Hua
PA Eli Lilly and Company, USA
SO PCT Int. Appl., 17 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002042261	A2	20020530	WO 2001-US42939	20011114
	WO 2002042261	A3	20030306		
	W: AE, AG, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, CZ, DE, DE, DK, DK, DM, DZ, EC, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	AU 2002028593	A5	20020603	AU 2002-28593	20011114
PRAI	US 2000-253073P	P	20001127		
	WO 2001-US42939	W	20011114		

OS CASREACT 136:401533; MARPAT 136:401533
GI



I

AB α-(3-Arylthio)acetophenones [I; R1, R2 = H, hydroxy-protecting group; e.g., α-(3-methoxyphenylthio)-4-methoxyacetophenone] are prepared in high yield and selectivity by the coupling of a thiophenol derivative 3-(R1O)C6H4SH (e.g., 3-methoxybenzenethiol) in an aqueous alkaline (e.g., KOH) solvent (e.g., Et acetate) with an aromatic ketone LCH2COC6H4(OR2)-4 (L = leaving group; e.g., α-chloro-4-methoxyacetophenone).

L4 ANSWER 14 OF 42 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2002:348716 CAPLUS
DN 138:137104
TI Synthesis of Raloxifene hydrochloride as selective estrogen receptor modulator
AU Chen, Yanzhong; Liu, Yingxiang
CS Guangdong College of Pharmacy, Canton, 510224, Peop. Rep. China
SO Guangdong Yaoxueyuan Xuebao (2002), 18(1), 1-3, 20
CODEN: GYXUF8
PB Guangdong Yaoxueyuan
DT Journal
LA Chinese
OS CASREACT 138:137104
AB Raloxifene was synthesized from α-bromo-p-methoxyacetophenone and m-methoxybenzenethiol via condensation, cyclization, acylation, and demethylation with the overall yield 49.2%. The chemical structure of compound was confirmed by 1H NMR, MS, IR, and elementary anal. The reaction conditions were mild and starting materials were com. available.

L4 ANSWER 15 OF 42 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2001:693327 CAPLUS
DN 135:242006
TI Preparation of trimethoxyphenyl-containing tubulin binding ligands and corresponding prodrug constructs as inhibitors of tubulin polymerization and antimitotic agents
IN Pinney, Kevin G.; Mocharla, Vani P.; Chen, Zhi; Garner, Charles M.; Ghatak, Anjak; Hadimani, Mallinath; Kessler, Jimmy; Dorsey, James M.
PA Baylor University, USA
SO PCT Int. Appl., 119 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 4

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2001068654	A2	20010920	WO 2001-US7539	20010309
WO 2001068654	A3	20020228		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
CA 2407967	A1	20010920	CA 2001-2407967	20010309

	EP 1263763	A2	20021211	EP 2001-916509	20010309
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	JP 2004505888	T	20040226	JP 2001-567745	20010309
	AU 2004201471	A1	20040506	AU 2004-201471	20040407
	US 2006100179	A1	20060511	US 2005-112055	20050422
	AU 2006235967	A1	20061130	AU 2006-235967	20061110
PRAI	US 2000-188295P	P	20000310		
	AU 2000-35973	A3	20000216		
	WO 2001-US7539	W	20010309		
	US 2002-218833	A1	20020814		

OS CASREACT 135:242006; MARPAT 135:242006

AB A diverse set of tubulin binding ligands (e.g. 3-(3',4',5'-trimethoxybenzoyl)-2-(3'-hydroxy-4'-methoxyphenyl)-6-methoxybenzo[b]thiophene (2)), all containing the 3,4,5-trimethoxyphenyl group, were discovered which are structurally characterized, in a general sense, by a semi-rigid mol. framework capable of maintaining aryl-aryl, pseudo pi stacking distances appropriate for mol. recognition of tubulin. In phenolic or amino form, these ligands may be further functionalized to prepare phosphate esters, phosphate salts (e.g. disodium phosphate of 2), and phosphoramides capable of demonstrating selective targeting and destruction of tumor cell vasculature. Data are presented from assays for inhibition of tubulin polymerization, cytotoxicity with P388 leukemia cells and growth inhibitory activity against other cancer cell lines. Compound 2 exhibits IC50 = 0.5-0.75 μM compared to 1.2 ± 0.02 for combretastatin A-4 for in vitro inhibition of tubulin polymerization A method is claimed for conversion of a 3-oxygenated-4-methoxyacetophenone to the corresponding α-halo-4-methoxyacetophenone by treatment of the corresponding trimethylsilyl enol ether with elemental halogen; similar conversions are also claimed. Six example prepns. are included.

RE.CNT 72 THERE ARE 72 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 16 OF 42 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2001:247325 CAPLUS

DN 134:266100

TI Synthesis of 4-[(2-piperidin-1-yl)ethoxy]benzoic acid for manufacture of Raloxifene hydrochloride

IN Luke, Wayne Douglas

PA Eli Lilly and Company, USA

SO PCT Int. Appl., 32 pp.
CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001023369	A2	20010405	WO 2000-US21974	20000918
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	EP 1220847	A2	20020710	EP 2000-966691	20000918
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL				
	JP 2003510313	T	20030318	JP 2001-526522	20000918
PRAI	US 1999-156205P	P	19990927		
	WO 2000-US21974	W	20000918		

OS CASREACT 134:266100; MARPAT 134:266100

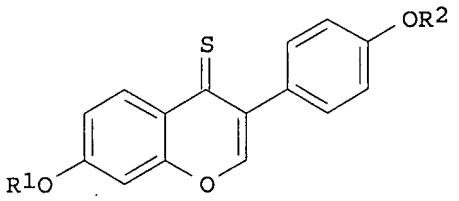
AB An improved process for the preparation of 4[(2-piperidin-1-yl)ethoxy]benzoic acid derivs. comprises reacting haloalkyl amine X(CH2)nNR1R2 (X = halogen; R1, R2 = C1-4 alkyl, combined with nitrogen atom to form piperidinyl, pyrrolidinyl, methylpyrrolidinyl, dimethylpyrrolidinyl, morpholino, 1-hexamethyleneimino group; n = 2, 3) with C1-6 alkyl p-hydroxybenzoate in the presence of a hydrated inorg. base in an appropriate solvent.

L4 ANSWER 17 OF 42 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2001:109239 CAPLUS
DN 135:19410
TI Improved synthesis of 4'-methoxy-2-(3-methoxyphenylthio)acetophenone
AU Weng, Lingling; Huang, Ying; Zhao, Jingguo
CS School of Pharmacy, West China University of Medical Sciences, Chengdu, 610041, Peop. Rep. China
SO Huaxi Yaoxue Zazhi (2000), 15(6), 437, 440
CODEN: HYZAE2; ISSN: 1006-0103
PB Huaxi Yike Daxue Yaoxueyuan
DT Journal
LA Chinese
OS CASREACT 135:19410
AB The title compound was synthesized from 3-mercaptophenyl Me ether and 2-bromo-4'-methoxyacetophenone by phase transfer reaction with tetrabutylammonium bromide as phase transfer catalyst in toluene in the presence of 40% NaOH solution at room temperature for 4 h.

L4 ANSWER 18 OF 42 CAPLUS COPYRIGHT 2007 ACS on STN
AN 1999:678286 CAPLUS
DN 131:286408
TI Preparation of benzothiophene and benzopyranthione derivatives as activators of estrogen receptor β
IN Matsunaga, Harushi; Oe, Morohisa; Kaneko, Hideo
PA Sumitomo Chemical Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 9 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 11292872	A	19991026	JP 1998-90296	19980402
PRAI	JP 1998-90296		19980402		

OS MARPAT 131:286408
GI



I

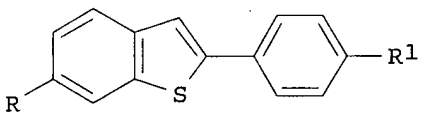
AB The title compds., e.g. benzopyranthione derivs. I [R1, R2 = H, alkyl, etc.], are prepared The activating effect of I [R1 = R2 = H] (preparation given)
on estrogen receptor β was demonstrated.

L4 ANSWER 19 OF 42 CAPLUS COPYRIGHT 2007 ACS on STN
AN 1999:350666 CAPLUS
DN 131:5184
TI Preparation of 2-arylbenzo[b]thiophenes for the treatment of estrogen deprivation syndrome

IN Cullinan, George Joseph
PA Eli Lilly and Company, USA
SO PCT Int. Appl., 40 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9925707	A1	19990527	WO 1998-US23719	19981109
	W: AL, AM, AU, AZ, BA, BB, BG, BR, BY, CA, CN, CU, CZ, EE, GD, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, RO, RU, SD, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW				
	RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	US 6096781	A	20000801	US 1998-185927	19981104
	TW 467909	B	20011211	TW 1998-87118568	19981107
	CA 2309859	A1	19990527	CA 1998-2309859	19981109
	AU 9913861	A	19990607	AU 1999-13861	19981109
	AU 748395	B2	20020606		
	ZA 9810214	A	20000509	ZA 1998-10214	19981109
	TR 200001288	T2	20000921	TR 2000-200001288	19981109
	BR 9813996	A	20000926	BR 1998-13996	19981109
	HU 200004731	A2	20010828	HU 2000-4731	19981109
	NZ 503988	A	20010928	NZ 1998-503988	19981109
	JP 2001523676	T	20011127	JP 2000-521090	19981109
	CN 1109683	B	20030528	CN 1998-810962	19981109
	EP 920862	A1	19990609	EP 1998-309227	19981111
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	NO 2000002371	A	20000705	NO 2000-2371	20000505
	MX 200004482	A	20001110	MX 2000-4482	20000509
	HR 2000000288	A1	20000831	HR 2000-288	20000510
	US 6395769	B1	20020528	US 2000-569409	20000512
PRAI	US 1997-65854P	P	19971114		
	US 1998-185927	A3	19981104		
	WO 1998-US23719	W	19981109		

OS MARPAT 131:5184
GI



I

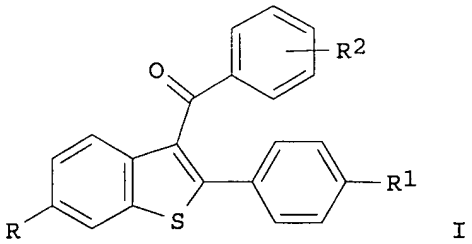
AB The title compds. [I; R, R1 = H, OH, alkoxy, etc.], useful for the inhibition of the various medical conditions associated with estrogen deprivation syndrome including osteoporosis and hyperlipidemia, were prepared and formulated. Thus, treatment of 2-(3-methoxyphenylthio)-4-methoxyacetophenone (preparation given) with polyphosphoric acid afforded I [R = R1 = MeO]. Compds. I are effective at 0.001-60 mg/day.
RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 20 OF 42 CAPLUS COPYRIGHT 2007 ACS on STN
AN 1999:350665 CAPLUS
DN 131:5183
TI Preparation of 2-aryl-3-aroylbenzo[b]thiophenes for the treatment of estrogen deprivation syndrome
IN Cullinan, George Joseph
PA Eli Lilly and Company, USA

SO PCT Int. Appl., 40 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9925706	A1	19990527	WO 1998-US23712	19981109
	W: AL, AM, AU, AZ, BA, BB, BG, BR, BY, CA, CN, CU, CZ, EE, GD, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, RO, RU, SD, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW				
	RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	US 6156786	A	20001205	US 1998-185929	19981104
	CA 2309824	A1	19990527	CA 1998-2309824	19981109
	AU 9913858	A	19990607	AU 1999-13858	19981109
	AU 748394	B2	20020606		
	ZA 9810215	A	20000509	ZA 1998-10215	19981109
	TR 200001290	T2	20000921	TR 2000-200001290	19981109
	BR 9812780	A	20001003	BR 1998-12780	19981109
	HU 200004413	A2	20010828	HU 2000-4413	19981109
	JP 2001523675	T	20011127	JP 2000-521089	19981109
	NZ 503990	A	20020531	NZ 1998-503990	19981109
	EP 920863	A1	19990609	EP 1998-309228	19981111
	EP 920863	B1	20030709		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	AT 244565	T	20030715	AT 1998-309228	19981111
	NO 2000002370	A	20000705	NO 2000-2370	20000505
	HR 2000000287	A1	20000831	HR 2000-287	20000510
	US 6403615	B1	20020611	US 2000-675389	20000929
PRAI	US 1997-65852P	P	19971114		
	US 1998-185929	A3	19981104		
	WO 1998-US23712	W	19981109		

OS MARPAT 131:5183
GI



I

AB The title compds. [I; R, R1 = H, OH, alkoxy, etc.; R2 = H, Cl, OH, etc.], useful for the inhibition of the various medical conditions associated with estrogen deprivation syndrome including osteoporosis and hyperlipidemia, were prepared and formulated. E.g., reaction of 2-(4-methoxyphenyl)-6-methoxybenzo[b]thiophene (preparation given) with 4-methoxybenzoyl chloride in the presence of AlCl3 in 1,2-Cl2C2H4 afforded I [R = R1 = MeO; R2 = 4-MeO]. Compds. I are effective at 0.001-60 mg/day.
RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 21 OF 42 CAPLUS COPYRIGHT 2007 ACS on STN
AN 1999:306607 CAPLUS
DN 131:87780
TI A new anti-tubulin agent containing the benzo[b]thiophene ring system

AU Pinney, Kevin G.; Bounds, A. Dawn; Dingeman, Koren M.; Mocharla, Vani P.; Pettit, George R.; Bai, Ruoli; Hamel, Ernest
CS Department of Chemistry, Baylor University, Waco, TX, 76798-7348, USA
SO Bioorganic & Medicinal Chemistry Letters (1999), 9(8), 1081-1086
CODEN: BMCLE8; ISSN: 0960-894X
PB Elsevier Science Ltd.
DT Journal
LA English
AB A new type of inhibitor of tubulin polymerization was discovered based on the 3-aroyl-2-arylbenzo[b]thiophene mol. skeleton. The lead compound in this series, 3-(3,4,5-Trimethoxybenzoyl)-2-(4-methoxyphenyl)-6-methoxybenzo[b]thiophene, inhibited tubulin polymerization, caused an increase in the mitotic index of CA46 Burkitt lymphoma cells, and inhibited the growth of several human cancer cell lines.
RE.CNT 37 THERE ARE 37 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 22 OF 42 CAPLUS COPYRIGHT 2007 ACS on STN
AN 1999:240165 CAPLUS
DN 130:352152
TI A facile synthesis of 3-arylbenzothiophenes via a Lewis acid mediated cyclization of 2-(arylthio)acetophenones
AU Kim, Seongkon; Yang, Jane; DiNinno, Frank
CS Dept. of Medicinal Chemistry, Merck Research Laboratories, Rahway, NJ, 07065, USA
SO Tetrahedron Letters (1999), 40(15), 2909-2912
CODEN: TELEAY; ISSN: 0040-4039
PB Elsevier Science Ltd.
DT Journal
LA English
OS CASREACT 130:352152
AB The boron trifluoride etherate mediated cyclization of 2-(arylthio)acetophenones at ambient temperature gave 3-arylbenzothiophenes in excellent yield. 2-Arylbenzothiophenes were not observed
RE.CNT 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 23 OF 42 CAPLUS COPYRIGHT 2007 ACS on STN
AN 1998:745474 CAPLUS
DN 130:97139
TI Application of Heterogeneous Acid Catalysts to the Large-Scale Synthesis of 2- and 3-(p-Methoxyphenyl)-6-methoxybenzo[b]thiophenes
AU Vicenzi, Jeffrey T.; Zhang, Tony Y.; Robey, Roger L.; Alt, Charles A.
CS Chemical Process Research and Development Lilly Research Laboratories, Eli Lilly and Company Lilly Corporate Center, Indianapolis, IN, 46285, USA
SO Organic Process Research & Development (1999), 3(1), 56-59
CODEN: OPRDFK; ISSN: 1083-6160
PB American Chemical Society
DT Journal
LA English
AB 2-(P-Methoxyphenyl)-6-methoxybenzothiophene was synthesized by acid-catalyzed cyclization and rearrangement of the β-ketosulfide precursor. The use of Amberlyst 15 resin as a catalyst for the cyclization increased the isomer ratio from 75:25 to 88:12, compared to a conventional approach using polyphosphoric acid (PPA). Although solid acid catalysts were also evaluated for the rearrangement, a two-phase mixture of methanesulfonic acid (MsOH) in toluene was the best alternative to the use of PPA for this reaction. The rearrangement, which was equilibrium controlled, was driven towards completion by crystallization of the product as it formed. An Amberlyst 15 catalyzed cyclization, combined with an MsOH-catalyzed rearrangement, raised the overall isolated yield from 70 to 80%, and difficulties associated with the use of PPA on a large scale were eliminated. This process was successfully scaled to a pilot plant and

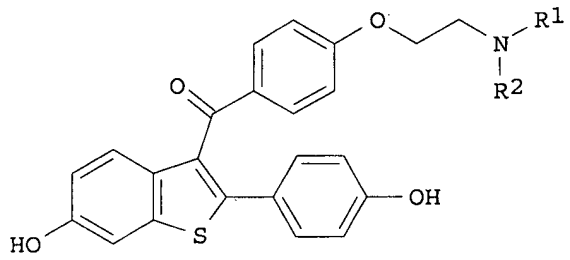
manufacturing scale. The product is a key intermediate in synthesis of raloxifene.

RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

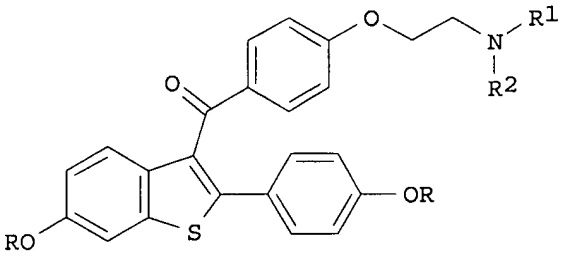
L4 ANSWER 24 OF 42 CAPLUS COPYRIGHT 2007 ACS on STN
AN 1998:721501 CAPLUS
DN 130:3768
TI Demethylation process for preparing benzo[b]thiophenes
IN Hoard, David Warren; Luke, Wayne Douglas
PA Eli Lilly and Company, USA
SO Eur. Pat. Appl., 13 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI EP 875511	A1	19981104	EP 1998-303345	19980429
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
CA 2236254	A1	19981030	CA 1998-2236254	19980427
JP 11005789	A	19990112	JP 1998-118628	19980428
US 5994547	A	19991130	US 1998-69500	19980429
PRAI US 1997-45156P	P	19970430		

OS CASREACT 130:3768; MARPAT 130:3768
GI



I



II

AB The preparation of benzo[b]thiophenes I [R1, R2 = C1-4 alkyl; NR1R2 = piperidino, pyrrolidino, etc.] by the acylation of alkoxy protected starting materials followed by demethylation of II using essentially odorless thiol compound (2-methyl-5-t-Bu-benzenethiol) are provided herewith. Demethylation may be carried out in the same reaction vessel without isolation of the acylated, protected material.

RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 25 OF 42 CAPLUS COPYRIGHT 2007 ACS on STN
AN 1998:344363 CAPLUS
DN 129:16052
TI Process for the synthesis of benzothiophenes
IN Vicenzi, Jeffrey Thomas
PA Eli Lilly and Company, USA
SO Eur. Pat. Appl., 10 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 842930	A1	19980520	EP 1997-309186	19971114
	EP 842930	B1	20020515		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	ZA 9710262	A	19990513	ZA 1997-10262	19971113
	CA 2271922	A1	19980528	CA 1997-2271922	19971114
	WO 9822456	A1	19980528	WO 1997-US21820	19971114
	W: AL, AM, AU, AZ, BA, BB, BG, BR, BY, CA, CN, CU, CZ, EE, GE, GH, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, RO, RU, SD, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW				
	RW: GH, KE, LS, MW, SD, SZ, UG, ZW, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	AU 9854622	A	19980610	AU 1998-54622	19971114
	AU 726401	B2	20001109		
	BR 9712773	A	19991026	BR 1997-12773	19971114
	CN 1237968	A	19991208	CN 1997-199842	19971114
	CN 1130357	B	20031210		
	HU 9904510	A2	20000528	HU 1999-4510	19971114
	JP 2001504497	T	20010403	JP 1998-524003	19971114
	AT 217620	T	20020615	AT 1997-309186	19971114
	IL 129868	A	20020912	IL 1997-129868	19971114
	ES 2173399	T3	20021016	ES 1997-309186	19971114
	US 5969157	A	19991019	US 1997-972783	19971118
	TW 461888	B	20011101	TW 1997-86117219	19971122
	IN 183355	A1	19991127	IN 1998-CA1845	19981016
	KR 2000053333	A	20000825	KR 1999-704344	19990517
PRAI	US 1996-31181P	P	19961119		
	IN 1997-CA2144	A1	19961119		
	WO 1997-US21820	W	19971114		

OS CASREACT 129:16052; MARPAT 129:16052
GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB The title compds. [I; R = C1-6 alkyl], key intermediates in the synthesis of, e.g. raloxifene [II; R1R2 = 1-piperidinyl], were prepared by cyclizing a dialkoxy compound III in the presence of methanesulfonic acid followed by subsequent rearrangement of benzothiophene IV.
RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 26 OF 42 CAPLUS COPYRIGHT 2007 ACS on STN
AN 1998:210748 CAPLUS
DN 128:243946
TI Process for the synthesis of benzothiophenes utilizing cation exchange resins
IN Vicenzi, Jeffrey T.
PA Eli Lilly and Co., USA; Vicenzi, Jeffrey T.

SO PCT Int. Appl., 25 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9813363	A1	19980402	WO 1997-US16683	19970919
	W: AL, AM, AU, AZ, BA, BB, BG, BR, BY, CA, CN, CU, CZ, EE, GE, GH, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, RO, RU, SD, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW				
	RW: GH, KE, LS, MW, SD, SZ, UG, ZW, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	ZA 9708372	A	19990317	ZA 1997-8372	19970917
	IN 183239	A1	19991009	IN 1997-CA1714	19970917
	EG 21037	A	20000930	EG 1997-961	19970918
	CA 2266617	A1	19980402	CA 1997-2266617	19970919
	AU 9743561	A	19980417	AU 1997-43561	19970919
	AU 718919	B2	20000420		
	CN 1230957	A	19991006	CN 1997-198100	19970919
	CN 1088704	B	20020807		
	BR 9712844	A	19991116	BR 1997-12844	19970919
	NZ 334591	A	20000728	NZ 1997-334591	19970919
	JP 2001501208	T	20010130	JP 1998-515741	19970919
	HU 9904228	A2	20010528	HU 1999-4228	19970919
	IL 129001	A	20030624	IL 1997-129001	19970919
	IL 143559	A	20040725	IL 1997-143559	19970919
	EP 832889	A1	19980401	EP 1997-307377	19970922
	EP 832889	B1	20060301		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	US 5977383	A	19991102	US 1997-934999	19970922
	AT 318805	T	20060315	AT 1997-307377	19970922
	ES 2257761	T3	20060801	ES 1997-307377	19970922
	TW 472053	B	20020111	TW 1997-86113989	19971226
	NO 9901193	A	19990325	NO 1999-1193	19990311
	KR 2000048539	A	20000725	KR 1999-702454	19990323
	IN 183769	A1	20000401	IN 1999-CA316	19990406
PRAI	US 1996-26695P	P	19960925		
	IN 1997-CA1714	A1	19970917		
	IL 1997-129001	A3	19970919		
	WO 1997-US16683	W	19970919		

OS CASREACT 128:243946; MARPAT 128:243946
GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB The title compds. [I; R = C1-6 alkyl], were prepared by cyclizing a dialkoxy compound II in the presence of a cation exchange resin such as a polystyrene-based sulfonic acid resin. Compds. I were converted into benzothiophenes III with MeSO3H in PhMe.

RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 27 OF 42 CAPLUS COPYRIGHT 2007 ACS on STN
AN 1998:161136 CAPLUS
DN 128:221639
TI Preparation of amorphous benzothiophenes for pharmaceuticals
IN Cuff, George W.; Thakkar, Arvind L.
PA Eli Lilly and Company, USA; Cuff, George W.; Thakkar, Arvind L.
SO PCT Int. Appl., 39 pp.

CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9808513	A1	19980305	WO 1997-US14768	19970822
	W: AL, AM, AU, AZ, BA, BB, BG, BR, BY, CA, CN, CU, CZ, EE, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LT, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, RO, RU, SD, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW				
	RW: GH, KE, LS, MW, SD, SZ, UG, ZW, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	EP 826682	A1	19980304	EP 1997-306426	19970822
	EP 826682	B1	20030312		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	CA 2263175	A1	19980305	CA 1997-2263175	19970822
	AU 9742335	A	19980319	AU 1997-42335	19970822
	AU 723987	B2	20000907		
	IN 182940	A1	19990814	IN 1997-CA1549	19970822
	BR 9713176	A	20000208	BR 1997-13176	19970822
	CN 1244124	A	20000209	CN 1997-197434	19970822
	HU 200001172	A2	20010628	HU 2000-1172	19970822
	NZ 333839	A	20010629	NZ 1997-333839	19970822
	IL 128641	A	20011031	IL 1997-128641	19970822
	TR 9900403	T2	20020121	TR 1999-403	19970822
	JP 2002514174	T	20020514	JP 1998-511744	19970822
	AT 234295	T	20030315	AT 1997-306426	19970822
	ES 2195089	T3	20031201	ES 1997-306426	19970822
	ZA 9707617	A	19990225	ZA 1997-7617	19970825
	US 6713494	B1	20040330	US 1997-918741	19970825
	NO 9900914	A	19990225	NO 1999-914	19990225
	KR 2000035941	A	20000626	KR 1999-701682	19990227
PRAI	US 1996-24831P	P	19960828		
	WO 1997-US14768	W	19970822		

OS MARPAT 128:221639
AB A method for preparing an amorphous form of a benzothiophene such as raloxifene is described. Thus, raloxifene-HCl was prepared by a series of reactions starting from 3-methoxybenzenethiol and 4'-methoxyphenacyl bromide. A formulation contained PEG-1450 70, spray-dried lactose 1.5, colloidal SiO2 1.5, Polysorbate-80 2.0, and raloxifene-HCl 25%. The bioavailability of raloxifene-HCl and the pharmacol. effects of this compound on osteoporosis and hyperlipidemia were determined
RE.CNT 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 28 OF 42 CAPLUS COPYRIGHT 2007 ACS on STN
AN 1998:133504 CAPLUS
DN 128:140605
TI Preparation of benzothiophenes for inhibiting PAI-1
IN Berg, David Thompson; Cullinan, George Joseph; Grinnell, Brian William; Richardson, Mark Alan
PA Eli Lilly and Co., USA
SO Eur. Pat. Appl., 11 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 819686	A1	19980121	EP 1997-305165	19970711
	EP 819686	B1	20031001		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				

	CA 2207083	A1	19980115	CA 1997-2207083	19970605
	AT 251150	T	20031015	AT 1997-305165	19970711
	ES 2208828	T3	20040616	ES 1997-305165	19970711
	JP 10067775	A	19980310	JP 1997-188363	19970714
PRAI	US 1996-21785P	P	19960715		

OS MARPAT 128:140605

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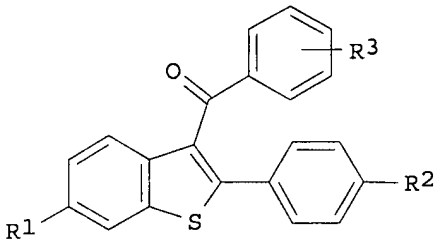

I

AB The title compds. [I; R1, R2 = OH, OCO(C1-6 alkyl), O(CO)O(C1-C6 alkyl), OCOAr (wherein Ar = (un)substituted Ph, O(CO)OPh); R3 = H, Cl, Br, Me, Et (at the 3 or 4 position) with the proviso that when R1, R2 are both OH, R3 is not H, Me, Et], useful for inhibiting PAI-1 or a physiol. condition associated with its excess in a human, were prepared and formulated. Thus, treatment of [2-(4-methoxyphenyl)-6-methoxybenzo[b]thien-3-yl][phenyl]methanone (preparation described) with pyridine.HCl at 220° afforded I [R1 = R2 = OH; R3 = H] which reduced 44% the induction of PAI-1 by IL-1 at 1 nM.

RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 29 OF 42 CAPLUS COPYRIGHT 2007 ACS on STN
AN 1997:640660 CAPLUS
DN 127:307297
TI Preparation of 3-[4-(2-aminoethoxy)benzoyl]-2-aryl-6-hydroxybenzo[b]thiophenes.
IN Jones, Charles David; McGill, John McNeill, III
PA Eli Lilly and Co., USA; Jones, Charles David; McGill, John McNeill, III
SO PCT Int. Appl., 33 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9734888	A1	19970925	WO 1996-US3934	19960320
	W: AL, AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	CA 2249406	A1	19970925	CA 1996-2249406	19960320
	AU 9652586	A	19971010	AU 1996-52586	19960320
	EP 888331	A1	19990107	EP 1996-908892	19960320
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, PT, IE, FI				
	JP 2000506885	T	20000606	JP 1997-533424	19960320
	US 6008377	A	19991228	US 1998-125848	19980821
PRAI	US 1996-13674P	P	19960319		
	WO 1996-US3934	W	19960320		

OS CASREACT 127:307297; MARPAT 127:307297

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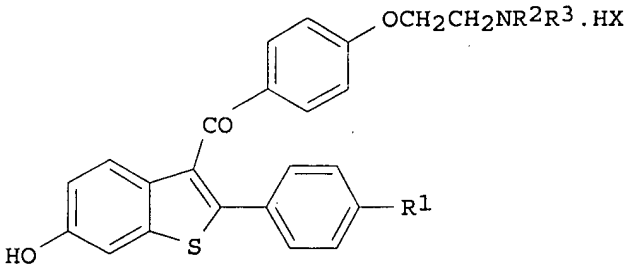

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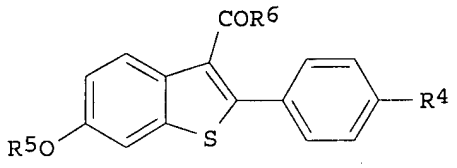

II

AB Title compds. (I; R1 = H, OH; R2, R3 = alkyl; R2R3N = pyrrolidino, piperidino, hexamethyleneimino, morpholino; HX = HCl, HBr) were prepared by reaction of PhOCH2CH2NR2R3.HX (variables as above) with acyl derivative (II; R4 = H, alkoxy; R5 = alkyl; R6 = Cl, Br, OH) in the presence of BX3. Thus, 6-methoxy-2-(4-methoxyphenyl)benzo[b]thiophene-3-carbonyl chloride (preparation given), and Ph 2-N-piperidinylethyl ether hydrochloride (preparation given) in 1,2-dichloroethane at 0° were treated with BCl3 in 1,2-dichloroethane at 0° followed by warming to 35° for 16-20 h to give 6-hydroxy-2-(4-hydroxyphenyl)-3-[4-(2-piperidinoethoxy)benzoyl]benzo[b]thiophene hydrochloride 1,2-dichloroethane solvate.

L4 ANSWER 30 OF 42 CAPLUS COPYRIGHT 2007 ACS on STN
AN 1996:256453 CAPLUS
DN 124:289251
TI Process for preparing benzoic acid derivative intermediates and benzothiophene pharmaceutical agents
IN Kjell, Douglas Patton; Perry, Fred Mason
PA Eli Lilly and Co., USA
SO Eur. Pat. Appl., 18 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 699672	A1	19960306	EP 1995-306050	19950830
	EP 699672	B1	19980422		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, NL, PT, SE				
	US 5631369	A	19970520	US 1994-298636	19940831
	IL 128881	A	20001206	IL 1995-128881	19950828
	CA 2157236	A1	19960301	CA 1995-2157236	19950830
	FI 9504067	A	19960301	FI 1995-4067	19950830
	HU 73141	A2	19960628	HU 1995-2537	19950830
	HU 222121	B1	20030428		
	BR 9503846	A	19960917	BR 1995-3846	19950830
	AT 165355	T	19980515	AT 1995-306050	19950830
	ES 2114721	T3	19980601	ES 1995-306050	19950830
	TW 427975	B	20010401	TW 1995-84109069	19950830
	JP 08119964	A	19960514	JP 1995-223183	19950831

	US 5750688	A	19980512	US 1996-629862	19960409
PRAI	US 1994-298636	A	19940831		
	IL 1995-115092	A3	19950828		

OS MARPAT 124:289251

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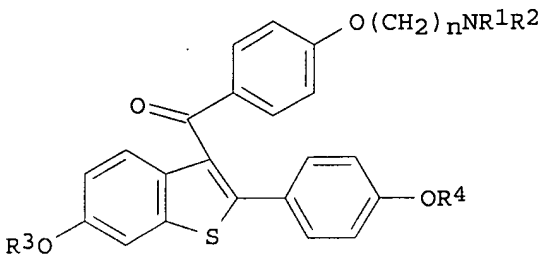

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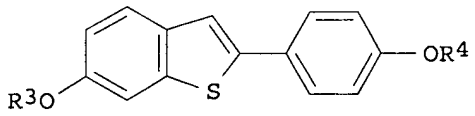

II

AB The present invention provides a novel process for preparing novel compds. of formula HO2C(p-C6H4)O(CH2)nNR1R2 [R1, R2 = C1-C4 alkyl, combine to form piperidinyl, pyrrolidinyl, methylpyrrolidinyl, dimethylpyrrolidinyl, morpholino, dimethylamino, diethylamino, or 1-hexamethyleneimino; n = 2, 3] or a pharmaceutically acceptable salt thereof, comprising (a) reacting a haloalkyl amine of formula X(CH2)nNR1R2 [X = halo; R1, R2, and n are as defined above], with a compds. of formula RO2C(p-C6H4)OH [R = C1-C6 alkyl], in the presence of an alkyl acetate solvent and a base; (b) extracting the reaction product of step (a) with an aqueous acid; and (c) cleaving the ester of the reaction product from step (b) to form an acid. The present invention further provides a novel process for preparing compds. of Formula I [R1, R2 = C1-C4 alkyl, or combine to form piperidinyl, pyrrolidino, methylpyrrolidino, dimethylpyrrolidinyl, morpholino, dimethylamino, diethylamino, or 1-hexamethyleneimino; R3, R4 = H, hydroxy protecting group; n = 2, 3] or a pharmaceutically acceptable salt thereof, comprising (a) reacting a haloalkyl amine of formula X(CH2)nNR1R2 [X = halo; R1, R2, and n are as defined above], with a compound of formula RO2C(p-C6H4)OH [R = C1-C6 alky], in the presence of an alkyl acetate solvent and a base; (b) extracting the reaction product from step (a) with an aqueous acid; (c) cleaving the ester of the reaction product from step (b) to form an acid; (d) reacting the extracted product from step (c) with a compound of formula II [R3 and R4 are as defined above], or a pharmaceutically acceptable salt thereof; (e) optionally removing R3 and R4 hydroxy protecting groups of the reaction product from step (d); and (f) optionally forming a salt of the reaction from either steps (d) or step (e).

L4 ANSWER 31 OF 42 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1996:237478 CAPLUS

DN 124:289249

TI An improved process for preparing 3-(4-aminoethoxybenzoyl)benzo[b]thiophenes

IN Alt, Charles Arthur

PA Eli Lilly and Co., USA

SO Eur. Pat. Appl., 15 pp.
CODEN: EPXXDW

DT Patent

LA English

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

PI	EP 693488	A1	19960124	EP 1995-305085	19950720
	EP 693488	B1	20010919		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, NL, PT, SE				
	US 5523416	A	19960604	US 1995-422294	19950414
	HU 71596	A2	19960129	HU 1995-2176	19950719
	AU 9525068	A	19960201	AU 1995-25068	19950719
	AU 684181	B2	19971204		
	ZA 9506031	A	19970120	ZA 1995-6031	19950719
	CA 2154319	A1	19960123	CA 1995-2154319	19950720
	FI 9503513	A	19960123	FI 1995-3513	19950720
	NO 9502891	A	19960123	NO 1995-2891	19950720
	CN 1116624	A	19960214	CN 1995-109618	19950720
	JP 08053440	A	19960227	JP 1995-183923	19950720
	IL 114684	A	19990620	IL 1995-114684	19950720
	AT 205842	T	20011015	AT 1995-305085	19950720
	ES 2160668	T3	20011116	ES 1995-305085	19950720
	PT 693488	T	20020228	PT 1995-305085	19950720
	BR 9503408	A	19960227	BR 1995-3408	19950721
	US 5512684	A	19960430	US 1995-512724	19950808
PRAI	US 1994-279456	A	19940722		
	US 1995-422294	A1	19950414		

OS CASREACT 124:289249; MARPAT 124:289249

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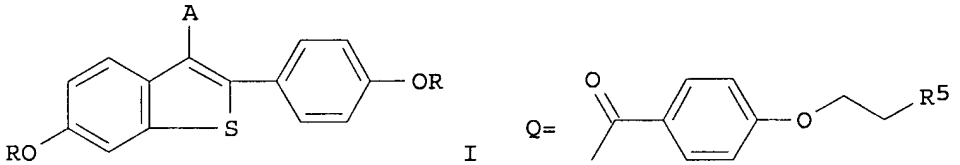
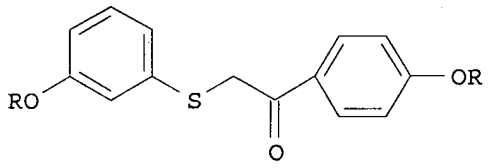




II

AB A process for preparing 6-alkoxy-3-(4-alkoxyphenyl)benzo[b]thiophenes (I; A = H; R = same or different C1-6 alkyl) in good yield on a manufacturing scale without generating a thick, potentially yield-reducing, paste and thereby without mixing problems, involves intramol. cyclization of α-(3-alkoxyphenylthio)-4-alkoxyacetophenones (II; R = same as above). The invention also provides methods for converting α-(alkoxyphenylthio)-4-alkoxyacetophenones I (A = H; R = same as above) into 6-hydroxy-2-(4-hydroxyphenyl)-3-[4-(2-aminoethoxy)benzoyl]benzo[B]thiophenes I (A = Q, R = H; R5 = NR1R2; wherein R1, R2 = C1-4 alkyl, or R1R2 = C4-6 polymethylene or CH2CH2OCH2CH2) via acylation of a dialkoxy benzo[b]thiophene I (A = H; R = same as above) with an acylating agent R4-Q (R4 = Cl, Br, an active ester, etc.; R5 = same as above) under Friedel-Crafts conditions. Thus, 164 g α-bromo-4-methoxyacetophenone was added portion-wise to a mixture of 100 g 4-methoxybenzenethiol and 39 g KOH in 300 mL and denatured EtOH in a cooling and stirred for 10 min in the cooling bath and at ambient temperature for 3 h to give, after workup, 158 g α-(3-methoxyphenylthio)-4-methoxyacetophenone. The latter compound (6.92 g) was added steadily over 1/2 h to a mixture of 41.5 g polyphosphoric acid and 13.8 g phosphoric acid and the reaction mixture was heated at 85° for 1.75 h and cooled to 50°, to give , after extraction with toluene and crystallization, the desired 6-isomer, I (A = H, R = Me)(69% yield). The latter compound (30 g) was heated with 90 g pyridine hydrochloride with stirring at 210° for

30 min to give, after workup, 25.5 g I (A = R = H), which (40 g) was acetylated by Ac2O in the presence of 4-dimethylaminopyridine in pyridine to give 52.5 g I (A = H, R = Ac). This compound (20 g) was added to a solution of 4-(2-piperidinoethoxy)benzoyl chloride (prepared from 16.3 g of the benzoic acid derivative) in ClCH2CH2Cl and stirred vigorously, followed by adding 73.4 g AlCl3 over 3 min, and the resulting mixture was stirred for 1 h to give, after workup, the desired product I [A = Q (wherein R5 = piperidino), R = Ac] as an oil, which was saponified with a mixture of 275 mL MeOH and 55 mL 5 n aqueous NaOH under reflux to give 10.5 g the title compound I

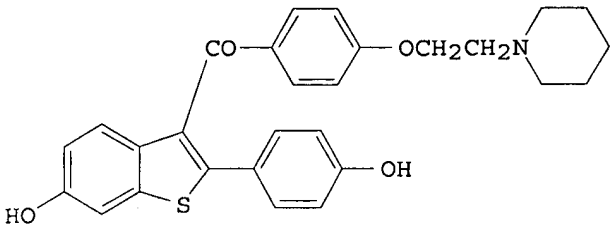
[A = Q, wherein R5 = piperidino, R = H].

L4 ANSWER 32 OF 42 CAPLUS COPYRIGHT 2007 ACS on STN
AN 1987:433189 CAPLUS
DN 107:33189
TI Treatment of mammary cancer
IN Black, Larry J.; Clemens, James A.
PA Eli Lilly and Co., USA
SO U.S., 10 pp. Cont. of U.S. Ser. No. 289,360, abandoned.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4656187	A	19870407	US 1983-556875	19831201
PRAI US 1981-289360	A1	19810803		

AB A method of inhibiting the growth of estrogen-dependent mammary cancers comprises administering about 20 mg/kg/day of a 1st compound 6-hydroxy-2-(4-hydroxyphenyl)-3-[4-(2-pyrrolidinoethoxy)benzoyl]benzo[b]th iophene (I) and .apprx.5 mg/kg/day of a 2nd compound tamoxifen (II). Also, a pharmaceutical combination comprises .apprx.4 parts by weight of I and .apprx.1 part by weight of II. I hydrochloride was prepared by reacting 4-(2-pyrrolidinoethoxy)benzoic acid with thionyl chloride and then with 6-methoxy-2-(4-methoxyphenyl)benzo[b]thiophene (prepared from 3-methoxybenzenethiol and α-bromo-4-methoxyacetophenone). Oral doses of I 20 and II 5 mg/kg/day were given for 8 wks to rats with induced mammary tumors. Half of the rats receiving the combination treatment experienced a total regression of their tumors. The rest had only a very modest growth of their tumors during the treatment. A synergistic effect was shown.

L4 ANSWER 33 OF 42 CAPLUS COPYRIGHT 2007 ACS on STN
AN 1984:448784 CAPLUS
DN 101:48784
TI Antiestrogens. 2. Structure-activity studies in a series of 3-aroyl-2-arylbenzo[b]thiophene derivatives leading to [6-hydroxy-2-(4-hydroxyphenyl)benzo[b]thien-3-yl]-[4-[2-(1-piperidinyl)ethoxy]phenyl]methanone hydrochloride (LY 156758), a remarkably effective estrogen antagonist with only minimal intrinsic estrogenicity
AU Jones, Charles D.; Jevnikar, Mary G.; Pike, Andrew J.; Peters, Mary K.; Black, Larry J.; Thompson, Allen R.; Falcone, Julie F.; Clemens, James A.
CS Lilly Res. Lab., Eli Lilly and Co., Indianapolis, IN, 46285, USA
SO Journal of Medicinal Chemistry (1984), 27(8), 1057-66
CODEN: JMCMAR; ISSN: 0022-2623
DT Journal
LA English
GI



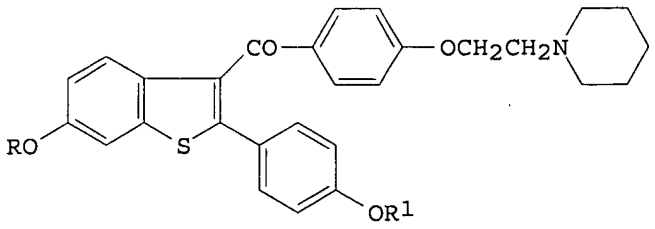
I

AB In an effort to prepare nonsteroidal antiestrogens demonstrating greater antagonism and less intrinsic estrogenicity than those currently available, a series of 3-aroyl-2-arylbenzo[b]thiophene derivs. was synthesized. These compds. were prepared by Friedel-Crafts aroylation of appropriate O-protected 2-arylbenzo[b]thiophene nuclei with basic side-chain-bearing benzoyl chlorides followed by removal of the protective groups to provide the desired compds. containing both hydroxyl and basic side-chain functionality. A particularly useful method for the cleavage of aryl methoxy ethers without removal of (dialkylamino)ethoxy side chain functionality elsewhere in the mol. was AlCl3/EtSH. The benzothiophene derivs. were tested for their ability to inhibit the growth-stimulating action of estradiol on the immature rat uterus. Seemingly minor changes in the side-chain amine moiety had profound effects on the ability of the compds. to antagonize estradiol. Analogs having basic side chains containing cyclic (pyrrolidine, piperidine, and hexamethyleneamine) moieties had less intrinsic estrogenicity and antagonized estradiol action more completely than their noncyclic counterparts. The most effective antiestrogen in the series, [6-hydroxy-2-(4-hydroxyphenyl)benzo[b]thien-3-yl]-[4-[2-(1-piperidinyl)ethoxy]phenyl]methanone (I) [84449-90-1], elicited a modest uterotropic activity that did not increase with increasing dose. In antagonism of estradiol, I exhibited a degree of inhibition surpassing that of tamoxifen at any dose tested. The new benzothiophene antiestrogen also had high affinity for rat uterine cytoplasmic estrogen receptor and was an inhibitor of the growth of DMBA-induced rat mammary tumors.

L4 ANSWER 34 OF 42 CAPLUS COPYRIGHT 2007 ACS on STN
AN 1984:156501 CAPLUS
DN 100:156501
TI Antiestrogenic and antiandrogenic benzothiophenes
IN Jones, Charles D.
PA Eli Lilly and Co., USA
SO U.S., 23 pp. Cont.-in-part of U.S. Ser. No. 246,335, abandoned.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 5

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4418068	A	19831129	US 1981-331042	19811216
	ZA 8202247	A	19831130	ZA 1982-2247	19820401
PRAI	US 1981-246335	A2	19810403		

OS CASREACT 100:156501
GI



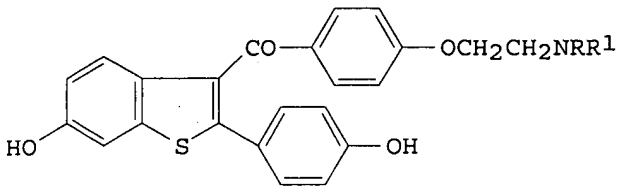
I

AB Antiandrogenic and antiestrogenic [(piperidinoethoxy)benzoyl]benzothiophen es I [R,R1 = H, R2CO; R2 = H, cycloalkyl, (un)substituted alkyl, Ph] were prepared Thus, 2-(4-hydroxyphenyl)benzo[b]thiophene-6-ol was esterified with MeSO2Cl and the diester subjected to Friedel-Crafts acylation with 4-(2-piperidinoethoxy)benzoyl chloride to give I (R = R1 = MeSO2). This was saponified to give I (R = R1 = H) (II). Immature female rats administered 0.03 μg estradiol propionate (III) s.c. together with 3 mg II s.c. daily for 4 d had average uterus weight of 21.3 mg. Those given III alone had average uterus weight of 65.9 mg. I also were effective as antiandrogens and as mammary tumor inhibitors.

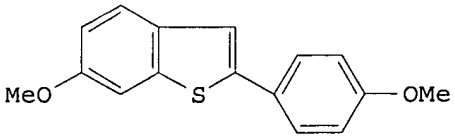
L4 ANSWER 35 OF 42 CAPLUS COPYRIGHT 2007 ACS on STN
AN 1983:422309 CAPLUS
DN 99:22309
TI Acylated benzothiophenes
IN Peters, Mary K.
PA Eli Lilly and Co., USA
SO U.S., 7 pp. Cont.-in-part of U.S. Ser. No. 246,333, abandoned.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 5

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4380635	A	19830419	US 1981-331046	19811216
	CA 1167036	A1	19840508	CA 1982-400262	19820331
	EP 62505	A1	19821013	EP 1982-301739	19820401
	EP 62505	B1	19850724		
	R: AT, BE, CH, DE, FR, GB, IT, LU, NL, SE				
	GB 2096608	A	19821020	GB 1982-9681	19820401
	GB 2096608	B	19850612		
	DD 201794	A5	19830810	DD 1982-238653	19820401
	CS 227347	B2	19840416	CS 1982-2356	19820401
	RO 84584	A1	19840717	RO 1982-107118	19820401
	PL 130584	B1	19840831	PL 1982-235751	19820401
	AT 14429	T	19850815	AT 1982-301739	19820401
	DK 8201513	A	19821004	DK 1982-1513	19820402
	FI 8201161	A	19821004	FI 1982-1161	19820402
	JP 57181079	A	19821108	JP 1982-56481	19820402
	ES 511123	A1	19830216	ES 1982-511123	19820402
	HU 28746	A2	19831228	HU 1982-1025	19820402
	HU 191084	B	19870128		
	SU 1138028	A3	19850130	SU 1982-3417251	19820402
PRAI	US 1981-246333	A2	19810403		
	US 1981-246335	A	19810403		
	US 1981-331045	A	19811216		
	US 1981-331046	A	19811216		
	EP 1982-301739	A	19820401		

GI



I



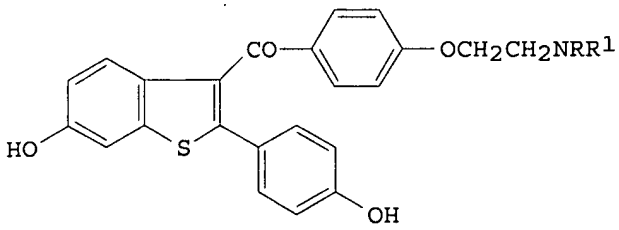
II

AB The acylated benzothiophenones I (R,R1 = C1-4 alkyl, RR1 = polymethylene, CH2CHMeCH2CH2, CH2CH2OCH2CH2) were prepared by acylation-demethylation of benzothiophenes II. Thus, 3-MeOC6H4SN was treated with BrCH2COC6H4OMe-p followed by cyclization to give II, which was treated with AlCl3 and the acid chloride of 4-(2-piperidinoethoxy)benzoic acid to give I (NRR1 = piperidino).

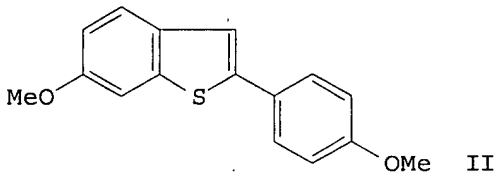
L4 ANSWER 36 OF 42 CAPLUS COPYRIGHT 2007 ACS on STN
AN 1983:71918 CAPLUS
DN 98:71918
TI Acylated benzothiophenes
IN Peters, Mary Kathleen; Jones, Charles David
PA Eli Lilly and Co., USA
SO Eur. Pat. Appl., 29 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 5

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 62505	A1	19821013	EP 1982-301739	19820401
	EP 62505	B1	19850724		
	R: AT, BE, CH, DE, FR, GB, IT, LU, NL, SE				
	US 4380635	A	19830419	US 1981-331046	19811216
	AT 14429	T	19850815	AT 1982-301739	19820401
PRAI	US 1981-246333	A	19810403		
	US 1981-246335	A	19810403		
	US 1981-331045	A	19811216		
	US 1981-331046	A	19811216		
	EP 1982-301739	A	19820401		

OS MARPAT 98:71918
GI



I



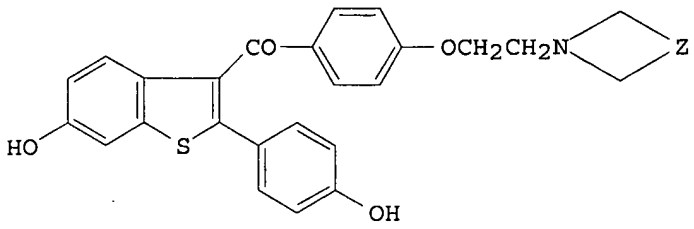
II

AB 3-[4-(2-Aminoethoxy)benzoyl]benzothiophenes I [R, R1 = C1-4 alkyl; RR1 = (CH2)4, (CH2)5, (CH2)6, CH2CHMeCH2CH2, CH2CH2OCH2CH2], useful as antiestrogens (no data), were prepared by acylating benzothiophene II. Thus, heating 3-MeOC6H4SCH2COC6H4OMe-4 with polyphosphoric acid gave II, which was acylated by 4-(Me2NCH2CH2O)C6H4CO2H.HCl and SOCl2 in PhCl-CH2Cl2 containing DMF and AlCl3 to give I (R = R1 = Me).

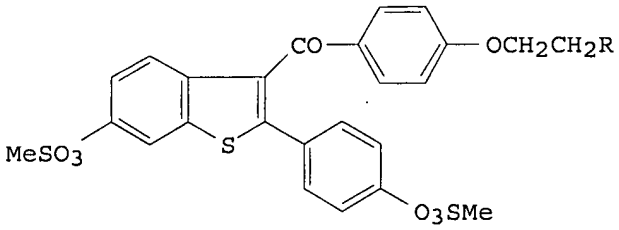
L4 ANSWER 37 OF 42 CAPLUS COPYRIGHT 2007 ACS on STN
AN 1983:71917 CAPLUS
DN 98:71917
TI Benzothiophene compounds
IN Jones, Charles David
PA Eli Lilly and Co., USA
SO Eur. Pat. Appl., 107 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 5

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 62503	A1	19821013	EP 1982-301737	19820401
	R: BE, CH, DE, FR, GB, IT, LU, NL, SE				
	AU 8282265	A	19821007	AU 1982-82265	19820401
	AU 555658	B2	19861002		
	GB 2097788	A	19821110	GB 1982-9680	19820401
	GB 2097788	B	19850424		
	JP 57181081	A	19821108	JP 1982-56479	19820402
PRAI	US 1981-246335	A	19810403		
	US 1981-331045	A	19811216		

GI



I



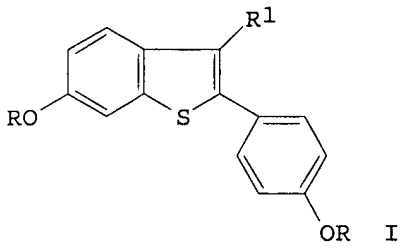
II

AB [(Aminoethoxy)benzoyl]benzothiophenes I (Z = CH2CH2CH2, CHMeCH2) were prepared, and limited the increase of uterine weight in rats treated with estradiol. Thus, treating II (R = Br) with 3-methylpyrrolidine in DMF containing KI gave II (R = 3-methyl-1-pyrrolidinyl) which was deprotected by NaOH to give I (Z = CHMeCH2).

L4 ANSWER 38 OF 42 CAPLUS COPYRIGHT 2007 ACS on STN
AN 1983:71916 CAPLUS
DN 98:71916
TI 3-(4-Aminoethoxybenzoyl)benzo[b]thiophenes
IN Jones, Charles David; Goettel, Mary Elizabeth
PA Eli Lilly and Co., USA
SO Eur. Pat. Appl., 59 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 5

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 62504	A1	19821013	EP 1982-301738	19820401
	EP 62504	B1	19860102		
	R: AT, BE, CH, DE, FR, GB, IT, LU, NL, SE				
	US 4358593	A	19821109	US 1981-246334	19810403
	IL 65378	A	19860228	IL 1982-65378	19820330
	CA 1167037	A1	19840508	CA 1982-400300	19820331
	GB 2097392	A	19821103	GB 1982-9679	19820401
	GB 2097392	B	19850424		
	DD 201793	A5	19830810	DD 1982-238654	19820401
	CS 227348	B2	19840416	CS 1982-2357	19820401
	PL 130867	B1	19840929	PL 1982-235752	19820401
	AT 17243	T	19860115	AT 1982-301738	19820401
	DK 8201512	A	19821004	DK 1982-1512	19820402
	FI 8201160	A	19821004	FI 1982-1160	19820402
	JP 57183788	A	19821112	JP 1982-56480	19820402
	ES 511124	A1	19830616	ES 1982-511124	19820402
	HU 28787	A2	19831228	HU 1982-1026	19820402
	HU 191353	B	19870227		
	SU 1155157	A3	19850507	SU 1982-3417550	19820402
PRAI	US 1981-246334	A	19810403		
	US 1981-246335	A	19810403		
	US 1981-331045	A	19811216		
	EP 1982-301738	A	19820401		

OS MARPAT 98:71916
GI



I

AB Benzothiophenes I [R = H; R1 = COC6H4O(CH2)2NR2R3-4; R2 = R3 = alkyl; R2R3 = (CH2)4-6, (CH2)2O(CH2)2, etc.] were prepared by Friedel-Crafts acylation of I (R = Ac, Bz, MeSO2; R1 = H) followed by hydrolysis of the ester groups. Thus, HSC6H4OMe-3 was treated with BrCH2COC6H4OMe-4 to give 3-MeOC6H4SCH2COC6H4OMe-4, which was cyclized with polyphosphoric acid to give I (R = Me, R1 = H). Demethylation of the latter followed by esterification with MeSO2Cl gave I (R = MeSO2, R1 = H; II). Friedel-Crafts acylation of 4 g II with 4-Me2N(CH2)2OC6H4COCl gave 6.2 g I [R = MeSO2, R1 = COC6H4O(CH2)2NMe2-4, III]. Hydrolysis of III gave I (R = H). I are estrogens, antiestrogens, and antiandrogens (no data).

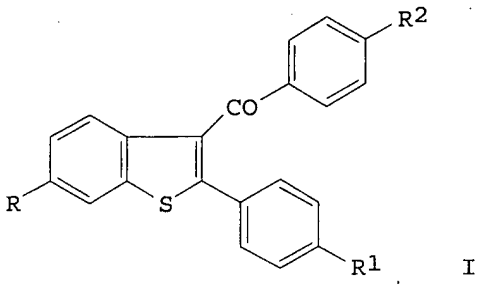
L4 ANSWER 39 OF 42 CAPLUS COPYRIGHT 2007 ACS on STN
AN 1979:151974 CAPLUS
DN 90:151974
TI 2-Phenyl-3-aroylbenzothiophenes useful as antifertility agents
IN Jones, Charles David; Suarez, Tulio
PA Eli Lilly and Co., USA
SO U.S., 22 pp.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4133814	A	19790109	US 1976-724203	19760917
	JP 52053851	A	19770430	JP 1976-121787	19761008
	JP 61000343	B	19860108		
	HU 21379	A2	19811128	HU 1976-EI707	19761015
	HU 179012	B	19820828		
	CA 1090795	A1	19801202	CA 1976-263844	19761021
	ES 452694	A1	19771116	ES 1976-452694	19761025
	ES 452695	A1	19771116	ES 1976-452695	19761025
	SU 701539	A3	19791130	SU 1976-2414465	19761025
	GB 1570610	A	19800702	GB 1976-44188	19761025
	AU 7619005	A	19780504	AU 1976-19005	19761026
	SU 764610	A3	19800915	SU 1976-2414462	19761026
	RO 70769	A1	19821026	RO 1976-88224	19761026
	DK 7604848	A	19770429	DK 1976-4848	19761027
	DK 152045	B	19880125		
	DK 152045	C	19880620		
	SE 7611955	A	19770429	SE 1976-11955	19761027
	SE 426945	B	19830221		
	SE 426945	C	19830602		
	ZA 7606440	A	19780628	ZA 1976-6440	19761027
	IL 50773	A	19800331	IL 1976-50773	19761027
	PL 107979	B1	19800331	PL 1976-193308	19761027
	PL 114190	B1	19810131	PL 1976-212113	19761027
	CH 635336	A5	19830331	CH 1976-13556	19761027
	BE 847719	A1	19770428	BE 1976-1007725	19761028
	NL 7611975	A	19770502	NL 1976-11975	19761028
	FR 2329271	A1	19770527	FR 1976-32514	19761028

	FR 2329271	B1	19790727		
	DD 127461	A5	19770928	DD 1976-195508	19761028
	AT 7608008	A	19791215	AT 1976-8008	19761028
	AT 357520	B	19800710		
	CS 205046	B2	19810430	CS 1976-6974	19761028
	CH 635582	A5	19830415	CH 1982-139	19820111
	CH 634316	A5	19830131	CH 1982-255	19820114
	DK 8502658	A	19850613	DK 1985-2658	19850613
PRAI	US 1975-626010	A2	19751028		
	CH 1976-13556	A	19761027		
	DK 1976-4848	A	19761027		

OS MARPAT 90:151974

GI



I

AB 3-Benzoylthiophenes I [R = OH; R1 = H, OH, alkoxy, OCH2CH2NR3R4 (R3 and R4 are independently alkyl or NR3R4 = pyrrolidino, piperidino, hexamethylenimino, morpholino); R2 = H] and acid addition salts of I (R1 = OCH2CH2NR3R4) exhibited antifertility and anti-tumor activity and were prepared by benzoylation of 2-phenylbenzothiophenes. PhCOCH2Br, PhSH, and pyridine was refluxed 6 h, the PhCOCH2SPh obtained was heated with polyphosphoric acid to yield 2-phenylbenzothiophene, and acylation of the product by 4-MeOC6H4COCl and AlCl3 gave I (R = R1 = H, R2 = OMe).

L4 ANSWER 40 OF 42 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1977:484806 CAPLUS

DN 87:84806

TI 2-Phenyl-3-aroylbenzothiophenes and 2-phenyl-3-aroylbenzothiophene 1-oxides

IN Jones, Charles David; Suarez, Tulio

PA Eli Lilly and Co., USA

SO Ger. Offen., 81 pp.
CODEN: GWXXBX

DT Patent

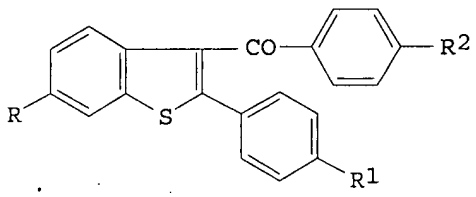
LA German

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2647907	A1	19770512	DE 1976-2647907	19761022
	DE 2647907	C2	19850124		
	JP 52053851	A	19770430	JP 1976-121787	19761008
	JP 61000343	B	19860108		
	HU 21379	A2	19811128	HU 1976-EI707	19761015
	HU 179012	B	19820828		
	CA 1090795	A1	19801202	CA 1976-263844	19761021
	ES 452694	A1	19771116	ES 1976-452694	19761025
	ES 452695	A1	19771116	ES 1976-452695	19761025
	SU 701539	A3	19791130	SU 1976-2414465	19761025
	GB 1570610	A	19800702	GB 1976-44188	19761025
	AU 7619005	A	19780504	AU 1976-19005	19761026
	SU 764610	A3	19800915	SU 1976-2414462	19761026
	RO 70769	A1	19821026	RO 1976-88224	19761026

	DK 7604848	A	19770429	DK 1976-4848	19761027
	DK 152045	B	19880125		
	DK 152045	C	19880620		
	SE 7611955	A	19770429	SE 1976-11955	19761027
	SE 426945	B	19830221		
	SE 426945	C	19830602		
	ZA 7606440	A	19780628	ZA 1976-6440	19761027
	IL 50773	A	19800331	IL 1976-50773	19761027
	PL 107979	B1	19800331	PL 1976-193308	19761027
	PL 114190	B1	19810131	PL 1976-212113	19761027
	CH 635336	A5	19830331	CH 1976-13556	19761027
	BE 847719	A1	19770428	BE 1976-1007725	19761028
	NL 7611975	A	19770502	NL 1976-11975	19761028
	FR 2329271	A1	19770527	FR 1976-32514	19761028
	FR 2329271	B1	19790727		
	DD 127461	A5	19770928	DD 1976-195508	19761028
	AT 7608008	A	19791215	AT 1976-8008	19761028
	AT 357520	B	19800710		
	CS 205046	B2	19810430	CS 1976-6974	19761028
	CH 635582	A5	19830415	CH 1982-139	19820111
	CH 634316	A5	19830131	CH 1982-255	19820114
	DK 8502658	A	19850613	DK 1985-2658	19850613
PRAI	US 1975-626010	A	19751028		
	CH 1976-13556	A	19761027		
	DK 1976-4848	A	19761027		

GI



I

AB Benzothiophenes I [R = H, OMe, OH; R1 = H, OMe, OH, pyrrolidinoethoxy, OCH2CH2NEt2, OAc, O2CEt, O2CBu, OBz, adamantylcarbonyloxy, O2COEt, Cl; R2 = H, OMe, OH, pyrrolidinoetoxy, piperidinoethoxy, hexamethyleniminoethoxy, OCH2CH2N(CHMe2)2] and the 1-oxide I (R = R1 = OH, R2 = H) were prepared Thus BrCH2COPh was treated with PhSH in the presence of pyridine, PhSCH2COPh cyclized with polyphosphoric acid, 2-phenylbenzothiophene subjected to Friedel-Crafts acylation with 4-MeOC6H4COCl and I (R = R1 = H, R2 = OMe) demethylated with pyridine-HCl to give I (R = R1 = H, R2 = OH). I are fertility inhibitors. Thus I (R = R1 H, R2 = OH) as 1 mg/kg day s.c. in rats for 15 days completely inhibited fetus development.

L4 ANSWER 41 OF 42 CAPLUS COPYRIGHT 2007 ACS on STN
AN 1957:29813 CAPLUS
DN 51:29813
OREF 51:5748i,5749a-i,5750a-d
TI Derivatives of thianaphthene. II. Thianaphthene derivatives formed by cyclization of acetonyl aryl sulfides and aryl phenacyl sulfides
AU Banfield, J. E.; Davies, W.; Gamble, N. W.; Middleton, S.
CS Univ. Melbourne
SO Journal of the Chemical Society (1956) 4791-9
CODEN: JCSOA9; ISSN: 0368-1769
DT Journal
LA Unavailable
OS CASREACT 51:29813
AB cf. C.A. 51, 3553g. Acetonyl aryl sulfides were prepared by methods A and B. Thus, in A, 11.0 g. PhSH (I) was added to 4.0 g. NaOH in 12.0 g. H2O under N and 8.5 ml. MeCOCH2Br (II) was added with cooling in 0.5 hr.

After 2 hrs., extraction with Et2O gave 53% acetonyl phenyl sulfide (III), m. 25-30°, b22 160-5°. In B, 5.0 ml. II was added slowly to 5.0 g. I in 25 ml. of C5H5N. The solution was heated 10 min. on a water bath. Acidification with aqueous HCl and extraction with Et2O gave 64% III, m. 30-3°. Similarly, the following acetonyl aryl sulfides were prepared (aryl group, m.p., b.p., nD, method of preparation, reaction time, and % yield given): o-tolyl (IV), -, 161-4°/22, 1.5750, B, 3 days, 60; m-tolyl (V), -, 158-64°/19, 1.5674, B, 5 min., 49; p-tolyl (VI), -, 164-8°/22, 1.5610, A, -, 55; p-methoxyphenyl (VII), -, 180-2°/18, 1.5718, B, 5 min., 55; 3,4-dimethoxyphenyl (VIII), -, 210-4°/28, 1.5778, B, 1 hr., 61; p-acetamidophenyl (IX), 151°, -, -, B, 0.5 hr., 68; 2-naphthyl (X), 46-6.2°, -, -, B, 24 hrs., 96; 1-naphthyl (XI), -, 167-77°/0.4, -, B, 12 hrs., 22. The following aryl phenacyl sulfides were prepared by refluxing the thiol in 1.5-4 wts. C5H5N with an equivalent of PhCOCH2Cl (aryl group, m.p., b.p., nD, m.p. of 2,4-dinitrophenylhydrazone, reaction time, and % yield given): o-tolyl (XII), 65-6°, -, -, -, 4 hrs., 50; m-tolyl (XIII), 45°, 176-82°/0.35, -, -, 6 hrs., 72; p-tolyl (XIV), 35-6°, 184-5°/0.1, -, -, 4 hrs., 78; p-methoxyphenyl (XV), -, 196-8°/0.2, 1.6229, -, 9 hrs., 78; 3,4-dimethoxyphenyl (XVI), 70-70.5°, 222-7°/0.5, -, -, 5 hrs., 95; p-acetamidophenyl (XVII), 121.5°, -, -, -, 0.5 hr., 72; 2-naphthyl (XVIII), 96.5-7.5°, -, -, -, 4 hrs., 66; 1-naphthyl (XIX), 83.5-4°, -, -, -, 5 hrs., 74; m-methoxyphenyl (XX), 46-7°, -, -, 153-4°, 6 hrs., 81. Similarly, p-nitrothiophenol in alc. NH3 at room temperature gave 90% p-nitrophenyl phenacyl sulfide (XXI), m. 118°. Similarly, 2,4-dinitrothiophenol in warm alc. NaOH gave 2,4-dinitrophenyl phenacyl sulfide (XXII), m. 170-1°. Similarly the following aryl 4-methoxyphenacyl sulfides were prepared (aryl group, m.p., m.p. of p-nitrophenylhydrozone, m.p. of 2,4-dinitrophenylhydrazone, reaction time, and % yield given): phenyl (XXIII), 89-90°, -, 169-70°, 4 hrs., 84; 3,4-dimethoxyphenyl (XXIV), 46.5-7.5°, 164-5°, -, 4 hrs., 90; 1-naphthyl (XXV), 71°, 148-5°, -, 4 hrs., 68; 2-naphthyl (XXVI), 95.5°, 159-60°, -, 4 hrs., 95; o-tolyl (XXVII), 50°, 162-3°, -, 5 hrs., 85; and p-dimethylaminophenyl, 69-70°, 184-5°, -, 4 hrs., 70. III with 0.33 part P2O5 at 160° 3/4 hr. gave 75% 3-methylthianaphthene (XXVIII). Similarly, III with 1.5 parts ZnCl2 at 190° 3/4 hr. gave 79% XXVIII. IV with 1 part P2O5 at 190° 3/4 hr. gave 60% 3,7-dimethylthianaphthene, m. 30-1°, b12 122-4°, nD15 1.6090. Similarly V at 170° 1.5 hrs. then at 190° 0.5 hr. gave 63% 3,6-dimethylthianaphthene, b18 133-4°, nD18 1.6158; picrate, m. 134.5-5.5°. Similarly VI at 190° in 0.75 hr. gave 27% 3,5-dimethylthianaphthene, b14 125-6°, nD15 1.6010; picrate, m. 113-4°. Similarly XI gave 62% 3-methyl-6,7-benzothianaphthene, m. 60.5-1.5°, b0.3 140-4°; picrate, m. 125.5-7.5°. X with 4 parts ZnCl2 at 180° 0.25 hr. and 190° 0.25 hr. gave 95% 3-methyl-4,5-benzothianaphthene, m. 58.5-9.5°, b0.5 150-70°; picrate, m. 152-3°. VIII (5.6 g.) with 1.9 g. P2O5 at 170-5° in 0.5 hr. gave 83% 5,6-dimethoxy-3-methylthianaphthene, m. 107-7.5°. VII and IX could not be cyclized. Refluxing I with an equivalent of PhCOCH2Cl in 1.5-4 wts. C5H5N 6 hrs. gave 95% phenyl phenacyl sulfide (XXIX), m. 52-3°, b0.5 173-7°. XXIX (5 g.), 35 g. P2O5, and 20 ml. H3PO4 was heated at 180-90° 3 hrs., cooled and poured into water. Et2O extraction gave 32% 2-phenylthianaphthene (XXX), m. 175-6°. XXX (0.8 g.) was refluxed 8 hrs. with 8 g. Raney Ni in 30 ml. (CH2OH)2. The filtrate was poured into water. The resulting precipitate was washed twice with 75 ml. CHCl3 which was then used to extract the aqueous solution The extract was dried and evaporated to give an oil (XXXI). Half of XXXI was refluxed 15 min. with 0.5 g. KMnO4 and 0.2 g. Na2CO3 in 10 ml. H2O. On treatment of the solution with SO2, BzOH, m. 120-1°, separated The remaining XXXI was shaken with fuming HNO3 then diluted with H2O to give 4,4'-dinitrobibenzyl, m.

178-9°. A solution of thianaphthenyllithium was prepared by the method of Shirley and Cameron (C.A. 44, 8902a). Freshly distilled PhF was added to the solution; after 24 hrs. the mixture was poured into H2O and extracted with Et2O. Evaporation and fractional crystallization gave 55% XXX. This proof of rearrangement of XXIX in cyclization to XXX refutes the structure previously assigned by Fries, et al. (C.A. 31, 14024), to XXX. XIII with polyphosphoric acid heated at 180-90° 3 hrs. gave 28% 6-methyl-2-phenylthianaphthene (XXXII), m. 184-4.5°. Desulfurization and oxidation of XXXII gave BzOH and 1,4-C6H4(CO2H)2; Me ester, m. 138-9°. Similarly, XIV gave 26% 5-methyl-2-phenylthianaphthene (XXXIII), m. 158-8.5°. Desulfurization and oxidation of XXXIII gave BzOH and 1,3-C6H4(CO2H)2, m. above 300°; anilide, m. 246-8°. Similarly, XX at 190° in 3 hrs. gave 6-methoxy-2-phenylthianaphthene (XXXIV), m. 58-9°. Refluxing XXXIV with Raney Ni in EtOH gave 4-methoxybibenzyl (XXXV), m. 58-60°, also prepared from 4-methoxybenzyl bromide and C6H6CH2MgCl. XVI with P2O5 at 190° gave 27% 5,6-dimethoxy-2-phenylthianaphthene, m. 116.5-17°. XIX (1 g.) was slowly stirred into 15 ml. cold H2SO4. After 30 min., the mixture was poured on ice. Extraction with petr. ether and chromatography on Al2O3 gave 2-phenyl-6,7-benzothianaphthene, m. 56-7°. XXIII with polyphosphoric acid at 190° 1 hr. gave 44% 2-p-methoxyphenylthianaphthene (XXXVI), m. 193-4°. Desulfurization of XXXVI gave XXXV. XXIV with an equal weight of ZnCl2 at 175-80° 40 min. gave a black glass from which petr. ether extracted 53% 5,6-dimethoxy-2-p-methoxyphenylthianaphthene, m. 85-6°; picrate, m. 96-7°. Similarly, XXV at 180° 1 hr. gave 64% 2-p-methoxyphenyl-6,7-benzothianaphthene, m. 164-5°. Similarly, XXVI at 170-5° 1 hr. gave 68% 2-p-methoxyphenyl-4,5-benzothianaphthene, m. 157-8°; picrate, m. 150-1°. H2SO4 at room temperature and P2O5 at 190° 0.75 hr. partly converted XVIII to di-2-naphthyl disulfide, m. 139°. XII, XVII, XXI, and XXII could not be cyclized with P2O5 at 190° 1 hr. Similarly, XXVII, p-tolyl-4-methoxyphenacyl, and p-acetamidophenyl-4-methoxyphenacyl sulfides could not be cyclized with H2SO4, SnCl4, P2O5. or ZnCl2.

L4 ANSWER 42 OF 42 CAPLUS COPYRIGHT 2007 ACS on STN
AN 1951:3500 CAPLUS
DN 45:3500
OREF 45:580e-h
TI Stereochemistry of some thio ether ketoximes. II
AU Vinkler, Elemer; Autheried, Kamill
SO Acta Univ. Szeged, Chem. et Phys. (1948), 2, 50-5
DT Journal
LA English
GI For diagram(s), see printed CA Issue.
AB Methods of preparing isomeric aryl arylmercaptomethyl ketoximes (I and II) and the influence of substituents on their configuration were studied. The following ketones, RSCH2COR', were prepared (R and R' given): Ph, 3,4-(MeO)2C6H3, radial needles, m. 75-6°; 3,4-(MeO)2C6H3, Ph, long prisms, m. 72°; 3,4-(MeO)2C6H3, 3,4-(MeO)2C6H3, needles, m. 139°. The anti-oximes (I) of the 3 ketones m. 98°, 112°, and 114°, and formed needles, prisms, and needles, resp. 3,4-Dimethoxy-α-(phenylmercapto)acetanilide m. 104°. (3,4-Dimethoxyphenylmercapto)acetyl chloride, yellowish oil. β-(3,4 - Dimethoxyphenylmercapto)propionanilide m. 101°. 3,4 - Dimethoxy-α-(3,4 - dimethoxyphenylmercapto)acetanilide m. 146°. Ph(3,4-dimethoxyphenyl)mercaptomethyl ketone oxime m. 111°; the results left unanswered the question which of the alternatives, I or II, is correct.

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